TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1893.

No. 285.

SEABURY AND JOHNSON, APPELLANT,

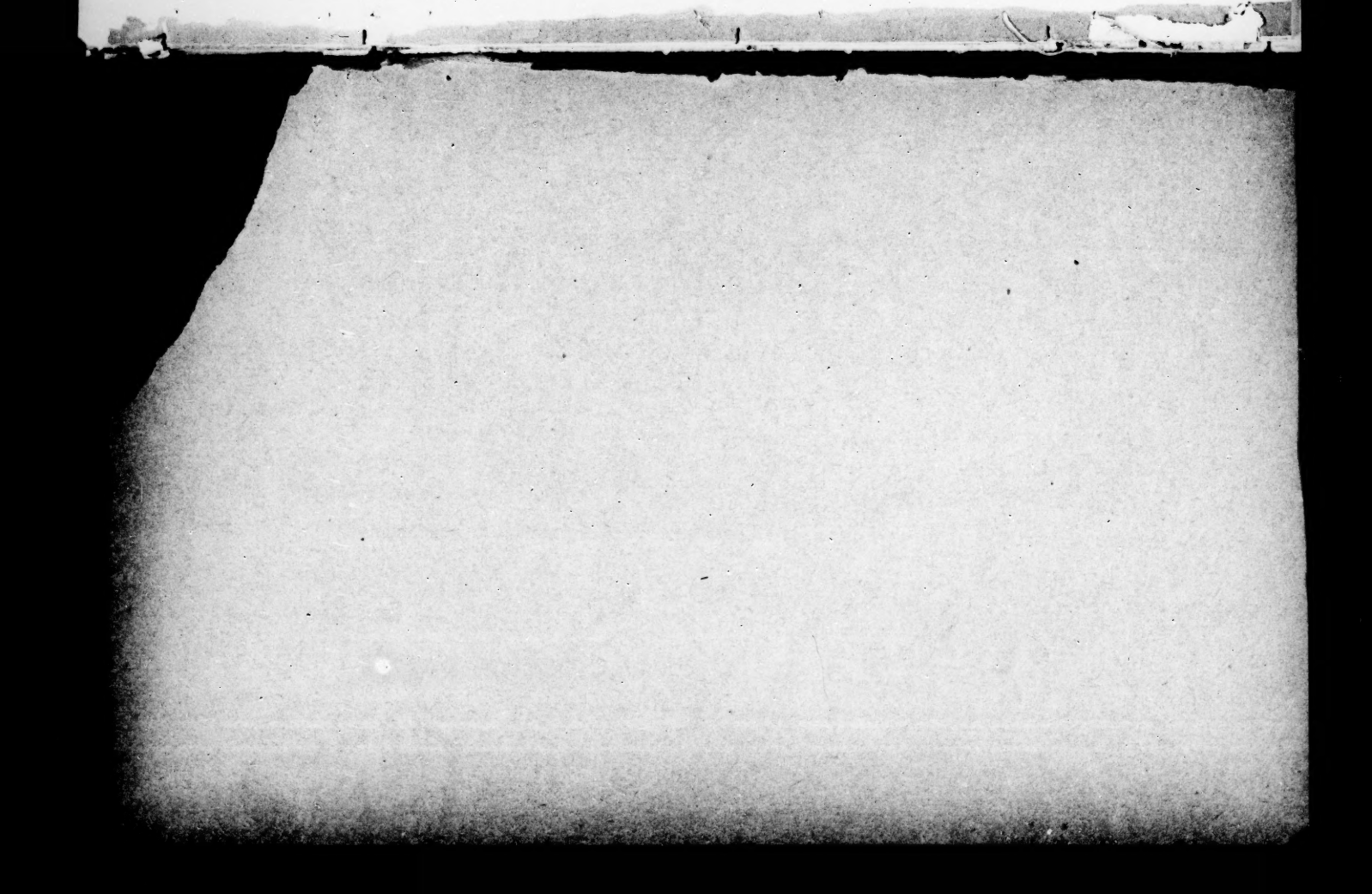
vs.

CHARLES G. AM ENDE.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF NEW YORK.

FILED OCTOBER 17, 1890.

(14,325.)



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The President of the United States of America to Seabury and Johnson, a corporation, etc., Greeting:

You are hereby commanded that you personally appear before the judges of the circuit court of the United States of America for the southern district of New York, in the second circuit, in equity, on the first Monday of July, A. D. 1887, wherever the said court shall then be, to answer a bill of complaint exhibited against you in the said court by Charles G. Am Ende, and do further and receive what the said court shall have considered in that behalf; and this you are not to omit under the penalty on you of two hundred and fifty dollars.

Witness Honorable Melville W. Fuller, Chief Justice of the Supreme Court of the United States, at the city of New York, on the 9th day of June, in the year one thousand eight hundred and eighty-seven, and of the Independence of the United States of America the one hundred and eleventh.

TIMOTHY GRIFFITH, *Clerk.*

——— ———,

Complainant's Sol'r.

The defendant is required to enter appearance in the above cause, in the clerk's office of this court, on or before the first Monday of July, 1887, or the bill will be taken *pro confesso* against it.

T. G., *Clerk.*

(Subpœna endorsed.)

I hereby certify that on the 10th day of June, 1887, at the city of New York, in my district, I personally served the within subpœna upon the within-named Seabury & Johnson, a corporation, etc., by exhibiting to John W. Peters, treas. of the above-named corporation, the within original, and at the same time leaving with him a copy thereof.

Dated June 10th, 1887.

(Signed) MARTIN F. McMAHON,
United States Marshal, Southern District of New York,
By GEORGE JEFFERY,
Deputy U. S. Marshal.

(Endorsed:) File-mark: U. S. circuit court. Filed June 14, 1887. Timothy Griffith, clerk.

Circuit Court of the United States for the Southern District of New York.

CHARLES G. AM ENDE
vs. In Equity.
SEABURY & JOHNSON.

To the honorable the judges of the circuit court of the United States for the southern district of New York:

Charles G. Am Ende, residing at Union Hill, in the county of Hudson, and State of New Jersey, and a citizen of said State, brings

this, his bill of complaint against Seabury & Johnson, a corporation duly organized and incorporated, as your orator is informed and believes under and in accordance with the laws of the State of New York, and having its principal place of business at the city of New York, in the county and State of New York; and thereupon your orator complains and says:

That your orator was and is the original and first inventor of new and useful improvements in composition of borated cotton fully described in the letters patent hereinafter mentioned,
4 and which had not been known or used before your orator's said invention, and which was not for more than two years before his application for a patent, as hereinafter mentioned, in public use, or on sale with his consent or allowance, and which had not been patented in this or any foreign country, or described in any printed publication before his invention thereof.

And your orator further shows unto your honors that your orator, being so as aforesaid the first inventor and discoverer of said improvements in composition of borated cotton, did, on August 15, 1876, upon due application therefor, obtain letters patent of the United States for said invention, in due form of law, under the seal of the Patent Office of the United States, signed by the acting Secretary of the Interior, and countersigned by the Commissioner of Patents of the United States, bearing date the day and year last aforesaid and numbered 181,024, whereby there was granted and secured to your orator and his heirs or assigns, or intended so to be, for the term of seventeen years from and after the date of said letters patent, the full and exclusive right and liberty of making, constructing, using and vending to others to be used, the said invention and improvements, as set forth in said letters patent, which, or a duly certified copy of which, is ready here in court to be produced.

And your orator further shows unto your honors that by virtue of the premises your orator became, and now is, the sole and exclusive owner of said letters patent, and the inventions and improvements described therein, and of all the rights and privileges granted and secured, or intended to be granted and secured thereby. And that since he became the owner thereof, as aforesaid, he has invested and expended large sums of money, and has been to great trouble in and about said invention, and for the purpose of carrying on the business of manufacturing and selling borated cotton, containing said invention and making the same profitable to himself and useful to the public; and that said invention has been, and is, of great benefit and advantage; and that large quantities of borated cotton were made according to said invention and sold by your orator to the great advantage of the public, and that the public have generally acknowledged and acquiesced in the
5 aforesaid rights of your orator, and your orator believes that he will realize and receive large gains and profits therefrom if infringements by said defendant and its confederates shall be prevented.

Yet, the said defendant well knowing the premises and the rights

secured to your orator as aforesaid, but contriving to injure your orator, and deprive him of the benefits and advantages which might, and otherwise would, accrue unto him from said invention, after the issuing of the letters patent as aforesaid, and before the commencement of this suit, but for what length of time your orator is not informed, and he prays a discovery thereof, did, as your orator is informed and believes, without the license or allowance, and against the will of your orator, and in violation of your orator's rights, and in infringement of the aforesaid letters patent, at the city of New York, aforesaid, in this the southern district of New York, and elsewhere unlawfully and wrongfully, and in defiance of the rights of your orator, make, construct, use and vend to others to be used, the said invention, and did make, construct, use and vend to others to be used, borated cotton made according to, and employing and containing said invention, and your orator charges it to be a fact that said defendant and its confederates still continue so to do; and that they are threatening to make the aforesaid borated cotton in large quantities, and to supply the market therewith, and to sell the same—

All in defiance of the rights acquired by and secured to your orator as aforesaid, and to your orator's great and irreparable loss and injury, and by which your orator has been and still is being deprived of great gains and profits which he might and otherwise would have obtained, but which have been received and enjoyed, and are being received and enjoyed by the said defendant, by and through its aforesaid unlawful acts and doings.

And your orator further shows unto your honors, on information and belief, that said defendant has made and sold and caused to be made and sold large quantities of said borated cotton, and has a large quantity on hand which it is offering for sale, and has made and realized large profits and advantages therefrom; but to
6 what extent, and how much exactly your orator does not know, and prays a discovery thereof. And your orator says that the use of said invention by said defendant, and its preparation for, and avowed determination to continue the same, and its other aforesaid unlawful acts, in disregard and defiance of the rights of your orator, have the effect to and do encourage and induce others to venture to infringe said patent in disregard of your orator's rights.

And your orator further shows unto your honors, that he has caused notice to be given to said defendant of said infringements, and of the rights of your orator in the premises, and requested said defendant to desist and refrain therefrom, but said defendant disregarded said notice, and refused to desist from said infringements, and still continues to make and sell said borated cotton without right.

And your orator prays that said defendant, Seabury & Johnson, and its officers, directors, managers, clerks, servants, agents, attorneys, and workmen, and each and every of them, may be restrained and enjoined provisionally and perpetually by the order and injunction of this honorable court, from directly or indirectly making,

constructing, using, vending, delivering, working, or putting into practice, operation or use, or in anywise counterfeiting or imitating the said invention, or any part thereof, or any borated cotton made in accordance therewith, or like or similar to that which the said defendant has heretofore made; and that the said defendant may be decreed to pay the profits unlawfully obtained by it by reason of the aforesaid infringement, and the damages thereby suffered by your orator, and the costs of this suit; and that your orator may have such further relief, or such other relief, as to this honorable court shall seem meet, and as shall be agreeable to equity.

And forasmuch as your orator can have no adequate relief except in this court, to the end, therefore, that the said defendant may, if it can, show why your orator should not have the relief hereby prayed, and may according to one of its officer's best and utmost knowledge, remembrance, information and belief, full, true, direct and perfect answers make to the premises, and to all the
7 several matters hereinbefore stated and charged, as fully and particularly as if severally and separately interrogated as to each and every of said matters, and may be compelled to account for and pay to your orator the profits by it acquired, and the damages suffered by your orator from the aforesaid unlawful acts. But an answer under oath is hereby expressly waived.

May it please your honors to grant unto your orator the writ of injunction, as well provisional as perpetual, issuing out of and under the seal of this honorable court, commanding, enjoining, and restraining the said defendant, Seabury & Johnson, and its officers, directors, managers, clerks, servants, agents, attorneys and workmen, and each and every of them, as is hereinbefore in that behalf prayed.

May it please your honors to grant unto your orator the writ of subpœna issuing out of and under the seal of this honorable court, directed to the said defendant, Seabury & Johnson, commanding it by a certain day, and under a certain penalty, to be and appear in this honorable court, then and there to answer the premises, and to stand to and abide such order and decree as may be made against it.

And your orator will ever pray, &c.

CHAS. G. AM ENDE.

BRIESEN & STEELE,
Comp't's Sol'rs.
ANTONIO KNAUTH,
Of Counsel.

UNITED STATES OF AMERICA,)
Southern District of New York, City and } *ss.:*
County of New York,)

On this 8th day of June, 1887, before me personally appeared Charles G. Am Ende, the above-named complainant, who being by me first duly sworn, deposes and says: That he has read the foregoing bill of complaint subscribed by him, and knows the contents

thereof, and that the same is true of his own knowledge, except
8 as to the matters therein stated on information and belief, and as to those matters he believes it to be true; and that he verily believes himself to be the true, original, and first inventor of the invention described and claimed in the letters patent referred to in said bill of complaint.

CHARLES G. AM ENDE.

Subscribed and sworn to before me, this 8th day of June, 1887.
[SEAL.] HARRY M. TURK,
Notary Public (111), *N. Y. County.*

(Bill endorsed:) United States circuit court, southern district of New York. Charles G. Am Ende *vs.* Seabury and Johnson. Bill in equity. Briesen & Steele, compl't's sol'rs, 229 B'dway, N. Y. city.
(File-mark:) U. S. circuit court. Filed June 9, 1887. Timothy Griffith, clerk.

9 United States Circuit Court, Southern District of New York.

CHARLES G. AM ENDE
vs.
SEABURY & JOHNSON.

The clerk will please enter my appearance as solicitor for the defendant in the above-entitled case.
Dated New York, June 16, 1887.

JOHN L. LOGAN,
Solicitor for Defendant, 66 Liberty St., N. Y. City.

To Timothy Griffith, clerk.

(Endorsed:) U. S. circuit court, S. D. N. Y. Charles G. Am Ende ag'st Seabury & Johnson. Notice of appearance. John L. Logan, solicitor for defendant, 66 Liberty St., N. Y. city.
(File-mark:) U. S. circuit court. Filed July 2, 1887. Timothy Griffith, clerk.

10 United States Circuit Court for the Southern District of New York.

CHARLES G. AM ENDE
vs.
SEABURY & JOHNSON. } In Equity.

The answer of Seabury & Johnson, a corporation existing under and by virtue of the laws of the State of New York, respondent, to the bill of complaint exhibited against it by the above-named complainant.

The respondent, now and at all times hereinafter, saving and reserving to itself all and all manner of benefit of exception which may be had or taken to the manifold errors, uncertainties, imper-

fections and insufficiencies of the said bill of complaint, for answer thereto, or to so much as it is advised it is material or necessary to make answer to, answering, says:

That upon information and belief alone, it admits that letters patent of the United States were issued to the person of the name alleged in this bill at the date therein referred to, for the alleged invention therein referred to, but whether any of the provisions or requirements of law were duly or at all complied with it has no knowledge or information, and cannot set forth, and leave the complainant to make such proof as he may be advised.

And the respondent, further answering, denies that it has ever or at all in any way infringed upon the aforesaid letters patent, or that it is now infringing upon the same, or intends so to do, either by making, using or vending to others to be used, or otherwise, said invention so alleged in the bill of complaint, or otherwise, or that it has made any profit therefrom or caused any damage to the complainant thereby.

11. And the respondent further answering, says, that it is advised, and therefore avers, that said letters patent, and each and every part thereof, are void and of no effect in law, because that the specification accompanying the same is not in such full, clear and exact terms as to enable any person skilled in the art to which it pertains, or to which it is most clearly connected, to practice the alleged invention, and because the said patentee did not therein give to the public the best and utmost of his knowledge as to the making and using of said invention, and because that for the purpose of deceiving the public the description and specification filed by the said patentee in the Patent Office were made to contain less than the whole truth relative to said invention, or more than is necessary to produce the desired effect.

And the respondent, further answering, says, that said letters patent, and each and every part thereof, are void and of no effect in law, because that the said Charles G. Am Ende surreptitiously and unjustly obtained the patent for that which was in fact invented by others who were using reasonable diligence in adapting and perfecting the same.

And the respondent, further answering, says, that it is informed and believes that the said letters patent, and each and every part thereof, are void and of no effect in law, because that the said alleged invention had been, prior to said alleged invention, or discovery thereof, patented by persons in and by patents, to wit:

English patents, 46 of 1861.
" " 379 of 1867.
" " 1893 of 1869.
" " 2577 of 1870.

and the further discovery of which, and the specific setting forth of the names of the patentees in the letters patent aforesaid, respondent respectfully prays permission to set forth more specifically by way of amended answer.

And the respondent, further answering, says, that the letters patent, and each and every part thereof, are void and of no effect in

law, because that the said alleged invention had been de-
12 scribed, or its substantial equivalent in some printed publication prior to the supposed invention, or discovery thereof, by the complainant, to wit:

1. Dingler's Polytechnic Journal.
2. Zustchi d. Allg. Oest.
3. Apoth. Veremus, February, 1871.

The further discovery of instances of publication, the papers and names of the periodicals aforesaid, respondent prays permission to set forth hereafter in detail and at large in this answer, or an amendment thereto.

And the respondent, further answering, says, that the said patent, and each and every part thereof, are void and of no effect in law, because that the said alleged inventor, Charles G. Am Ende, was not the original and first inventor or discoverer of any material or substantial part of the said alleged invention or discovery, but that the same, and every part of the same, had been previously invented and used by and known to many persons.

And the respondent, further answering, says, that in view of the state of the art there was no invention required to make the combination claimed by the complainant, and patented by him.

And the respondent denies that any invention was required or exercised in making the particular combination shown in said letters patent, but that the making of the same was a matter of ordinary chemical knowledge.

And the respondent, further answering, says, that the said letters patent, and each and every part thereof, are void and of no effect whatever in law, because that the said alleged invention, with the knowledge, acquiescence, and consent of said inventor and patentee, had been in public use and on sale in this country for more than two years before the said inventor and patentee applied for a patent therefor, and that the same had been abondoned to the public by said alleged inventor and patentee.

And the respondent denies that said letters patent or the alleged rights of the complainant have ever been at all recognized, acknowledged, or acquiesced in, but on the contrary, that said alleged invention has been publicly used in disregard to any alleged rights of the complainant.

13 & 14 And the respondent denies all and all manner of unlawful combinations by the said bill charged without this, that there is any other matter, cause or thing in the said bill of complaint contained material or necessary to make answer unto, and not herein and hereby well and sufficiently answered, confessed, traversed, and avoided or denied, — true, to the knowledge or belief of the respondent; all of which matters and things the respondent is ready and willing to aver, maintain and prove, as this honorable court shall direct, and humbly prays to be hence dismissed, with its reasonable costs and charges in this behalf wrongfully sustained.

JOHN L. LOGAN,
Respondent's Solicitor.

(Answer endorsed:) U. S. circuit court, southern district of New York. Charles G. Am Ende *vs.* Seabury & Johnson. Answer. John L. Logan, solicitor for respondent, 66 Liberty St., New York city.

(File-mark:) U. S. circuit court. Filed Sept. 15, 1887. Timothy Griffith, clerk.

Circuit Court of the United States for the Southern District of New York.

CHARLES G. AM ENDE }
vs.
SEABURY & JOHNSON. }

And now comes the defendant, and by consent amends the answer filed in the following particulars: By inserting after the words in folio 8, "3. Apoth. Veremus, February, 1871," the following: "Druggists' Circular and Chemical Gazette, for June, 1875, page 108, 3d paragraph, under the head of boracic acid; the American Journal of Pharmacy for November, 1871, page 516, paragraph headed glycerized cotton for dressing wounds; the American Journal of Pharmacy, for March, 1867, page 149 *et seq.*, article headed glycerine."

We hereby consent to the filing of the above amended answer.

Dated New York, January 14, 1888.

BRIESEN & STEELE,
Compl't's Sol.

(Amended answer endorsed:) U. S. circuit court, so. dist. of New York. Charles G. Am Ende, compl't, against Seabury & Johnson, def't. Amended answer. John L. Logan, sol. for defendant, 66 Liberty street, New York city.

(File-mark:) U. S. circuit court. Filed Jan. 17, 1888. Timothy Griffith, clerk.

15 Circuit Court of the United States for the Southern District of New York.

CHARLES G. AM ENDE }
vs.
SEABURY AND JOHNSON. }

The replication of Charles G. Am Ende, complainant, to the answer of Seabury & Johnson, defendant.

This repliant, saving and reserving unto himself now and at all times hereafter all and all manner of benefit and advantage of exception which may be had or taken to the manifold insufficiencies of the said answer, for replication thereunto says that he will aver, maintain, and prove his said bill of complaint to be true, certain, and sufficient in law to be answered unto, and that the said answer of the said defendant is uncertain, untrue, and insufficient to be replied unto by this repliant.

Without this, that any other matter or thing whatsoever in the said answer contained material or effectual in law to be
15½ replied unto and not herein and hereby well and sufficiently replied unto, confessed or avoided, traversed or denied, is true; all which matters and things this repliant is and will be ready to aver, maintain; and prove as this honorable court shall direct, and humbly prays as in and by his said bill he has already prayed.

(Signed) BRIESEN & STEELE,
Solicitors for Complainant.

(Endorsed:) United States circuit court, southern district of New York. In equity. Charles G. Am Ende *vs.* Seabury & Johnson. Replication. Briesen & Steele, sol'rs for complainant, No. 229 Broadway, New York, N. Y.

(File-mark:) U. S. circuit court. Filed Sept. 19, 1887. Timothy Griffith, clerk.

16 United States Circuit Court, Southern District of New York

CHARLES G. AM ENDE
vs. In Equity.
SEABURY & JOHNSON.

Testimony taken in behalf of the complainant for final hearing, pursuant to the annexed notice, before Timothy Griffith, Esq., a standing examiner, at the office of Briesen & Steele, No. 229 Broadway, New York city, on September 23, 1887, at 11 o'clock a. m.

Present: A. Knauth, Esq., of counsel for complainant, and John L. Logan, Esq., of counsel for defendants.

At the request of defendants' counsel, the examination is
17 adjourned to September 26, 1887, at the same place and hour.

NEW YORK, *September* 26, 1887—11 a. m.

Met pursuant to adjournment.

Present: Counsel as before.

Complainant's counsel offers in evidence a certified copy of U. S. letters patent No. 181,024 dated August 15, 1876, and granted to Charles G. Am Ende for an improvement in composition of borated cotton for preserving, and the same is marked Complainant's Exhibit Am Ende Patent, September 26, 1887, T. G., ex'r.

MAGGIE STACK, a witness produced on behalf of complainant, having first been duly cautioned and sworn, testifies as follows:

Q. 1. What is your name, age, residence, and occupation?

A. Maggie Stack: aged 15: I reside at 364 West Twenty-seventh street, New York, and am a book-keeper in a millinery store, by occupation.

Q. 2. Did you ever go to the store of Hunt & Dunlap, druggists, in this city, and if so, state when and what you bought there?

A. I don't remember the date exactly, but I bought one package of borated cotton.

Q. 3. In what month was it?

A. May, 1887.

Q. 4. Have you that package of borated cotton here?

A. Yes, sir.

Q. 5. Please produce it, so that we can identify it.

A. This is it.

The package is produced and is offered in evidence by complainant's counsel and marked Complainant's Exhibit Stack Package No. 1, September 26, 1887, T. G., ex'r.

18 Q. 6. Did you pay for the package and if so, how much?

A. Fifteen cents.

Q. 7. Is it in the same condition now in which it was at the time when you bought it, excepting the marks which have been placed upon it by the examiner and by yourself?

A. Yes, sir.

Q. 8. Did you afterwards go again to the store of Hunt & Dunlap?

A. Yes, sir.

Q. 9. What did you do then?

A. I bought two more packages of borated cotton.

Q. 10. Did you pay for them?

A. Yes, sir; 30 cents.

Q. 11. When did you buy these two packages?

A. May 20, 1887.

Q. 12. Can you produce these two packages, or one of them?

A. I can produce one.

Complainant's counsel offers the package produced by the witness in evidence, and the same is marked Complainant's Exhibit Stack Package No. 2, September 26, 1887, T. G., ex'r.

Q. 13. Where is the store of Hunt & Dunlap situated in this city?

A. Thirtieth street and Broadway.

Q. 14. What did you do with the other package of borated cotton which you bought at that store on May 20, 1887, and which you have not produced?

A. I gave it to Dr. Stillman.

Q. 15. Where is Dr. Stillman?

A. Stevens institute in Hoboken.

Complainant's counsel requests defendants' counsel to admit that the two packages produced and marked in evidence are of the manufacture of the defendants in this suit.

19 Q. 16. Did the package of borated cotton which you handed to Dr. Stillman bear the same label as the packages marked Stack packages Nos. 1 and 2?

A. Yes, sir.

Direct examination closed.
No cross-examination.

Recess taken till 2 p. m.

After recess.

Complainant's counsel asks defendant's counsel whether he will stipulate to divide the time for taking proofs under the rule as follows: Complainant to have 15 days for the *prima facie* case, defendant to have 45 days and complainant to have 30 days for rebuttal testimony, and gives notice that if no arrangement to that effect can be made previously, he will move the court at a special term to be held at chambers on Friday, September 30, 1887, at 11 a. m., or as soon thereafter as counsel can be heard, for a division of time to take proofs under the rule.

Dr. THOMAS B. STILLMAN, being called as a witness on behalf of the complainant, and duly sworn, deposes as follows:

Q. 1. What is your name, age, residence and occupation?

A. Thomas B. Stillman; aged 35; I reside in Hoboken, N. J., and am by profession an analytical chemist—professor of analytical chemistry at Stevens Institute of Technology at Hoboken.

Q. 2. Please state what experience you have had as an analytical chemist.

A. Thirteen years of practical experience at New York and New Jersey. I graduated from Rutgers college, New Brunswick, N. J., in 1873; was appointed as instructor of analytical chemistry at Stevens institute in 1874. Pursued one year's course of study under Fresenius in Germany, graduating from his chemical college at Weisbaden. I formed a partnership in 1877, in New York city with Wm. H. Fuller for practicing analytical chemistry in all its branches; our office was at 40 Broadway. This partnership was dissolved in 1879, since which time I have carried on the business for myself. In 1881 I was called to the Stevens institute as instructor in analytical chemistry, and in June, 1886, was appointed professor of analytical chemistry at Stevens institute. My work covers a wide range. Investigations into the nature of dye-stuffs, steel and iron analyses, investigations relating to water supply, analyses of fertilizers, coals, oils, lubricating oils, disinfectants, and in general all matters brought before an analytical chemist.

Q. 3. Did you ever make any examination of an article called borated cotton with a view of finding out its ingredients, and if so, state when and where?

A. I did a few months ago at the Stevens institute for Mr. Am Ende.

Q. 4. Who brought this borated cotton to you?

A. A messenger from Mr. Am Ende with a letter.

Q. 5. Is that messenger now present?
A. She is.

It is agreed that the messenger referred to is the witness Maggie Stack now present.

Q. 6. Please describe the package in which said borated cotton was contained.

A. It was a small paper package unbroken, marked "Seabury & Johnson, borated cotton."

Q. 7. Did it bear the same label as Complainant's Exhibit Stack Package No. 1?

A. It did.

Q. 8. Did you receive only one such package from Maggie Stack?

A. I received two, one after the other; the same messenger handed me both.

Q. 9. Did you examine both packages or only one of them?

A. Only one; I found that number one was sufficient to make the analysis with.

21 Q. 10. What did you do with the other package which you did not examine?

A. It is in my desk, and I think unbroken.

Q. 11. Please state what examination you made with the first package opened and examined by you, and also the results of such examination.

A. I was requested in the note with which the package was sent, to examine the material, especially for boracic acid and glycerin-; I found those present, the amounts of which are stated in my written report to Mr. Am Ende.

Q. 12. Is the paper which I now hand you, the report to which you refer in your answer?

A. It is.

Q. 13. How did you find the boracic acid and glycerine to be present in the cotton; I mean in what condition?

A. As glycerine and as boracic acid, the latter soluble in the former with a small amount of water.

Q. 14. Do you mean soluble?

A. Yes.

Q. 15. Was the cotton fibre saturated with this compound as described by you?

A. It probably was; if not, the surface of the cotton only would show the material. The cotton was treated with warm water, and re-treated until it failed to give any evidence of boracic acid or of glycerine.

Another reason for thinking it was throughout the mass of cotton would be that where it is saturated through the fibre it is uniform in appearance; were the material on the outside only, the centre of each fibre would be dry and the outside moist, a condition which did not appear to me. The cotton being itself an absorbent, a solution of glycerine with water, would penetrate through all its parts;

as both of these substances, water and glycerine, are the greatest solvents known.

Q. 16. How did the borated cotton which you examined compare in appearance and touch with the cotton contained in Complainant's Exhibit Stack Package No. 2?

A. It appears to be the same.

Complainant's counsel offers in evidence the report identified by the witness, and the same is marked Complainant's Exhibit Stillman Report, September 26, 1887, T. G., ex'r.

22 Q. 17. The specification of the patent in suit states: "I first prepare a solution of boracic acid in the usual manner, and add thereto a small proportion of glycerine." How is a solution of boracic acid usually made?

A. It dissolves in about 25 parts of cold water, 8 to 12 parts of hot water; authorities differ on that, however. Possibly in its own weight of hot water, and water is the solvent generally used.

Q. 18. Will cotton in bulk or in wadding, when immersed in the usual solution of boracic acid, and an addition of glycerine, be impregnated with this solution?

A. I think so.

Q. 19. The specification states that "the glycerine is added to increase the preserving power of the borated cotton. It renders the cotton slightly hygroscopic, thus aiding in the diffusion of the acid and in the preservative effect of the prepared cotton." What is the meaning of the term "hygroscopic"?

A. The property of absorbing moisture from the air.

Q. 20. Has glycerine, to your knowledge, any preserving power?

A. It has.

Q. 21. Now, please compare the borated cotton examined by you, and to which you have testified, with the claim of the patent in suit, which I now hand you, and state whether or not it contained the invention set forth in that claim?

A. I think it does.

Q. 22. Webster's Dictionary states the meaning of the word "hygroscopic" to be: "1. Pertaining to the hygroscope; not readily manifest to the senses, but capable of detection by the hygroscope; said of moisture; as glass is often covered with a film of hygroscopic moisture. 2. Having the property of readily imbibing moisture from the atmosphere, or of becoming coated with a thin film of moisture, as glass, etc." In which of the two meanings is the term "hygroscopic" used in the specification of the patent in suit?

A. No. 2. For instance, take phosphoric anhydride, a white 23 powder; this is so hygroscopic that when exposed to the air becomes liquid in a short time from the absorption of moisture in the air.

Direct examination closed.

Adjourned to Saturday, October 1, 1887, at 11 a. m.

NEW YORK, *October* 1, 1887—11 a. m.

Met pursuant to adjournment.

Present: Counsel as before.

Defendants' counsel admits that Complainant's Exhibit Stack Package No. 1 and Complainant's Exhibit Stack Package No. 2, were manufactured and sold by the defendants, prior to the commencement of this suit, within the jurisdiction of this court.

DR. STILLMAN, complainant's expert, is produced for cross-examination:

X Q. 23. What is the object in the combination of glycerine and boracic acid with raw cotton?

A. To act as an antiseptic.

X Q. 24. For what purpose is the glycerine used?

A. It acts for two purposes: 1st. Antiseptic and preservative. 2d. To produce a soft feeling to the cotton, without which the cotton would have a rough or hard feeling.

X Q. 25. What is the object of the use of boracic acid?

A. As an antiseptic dressing, being much more powerful in this respect than glycerine alone.

X Q. 26. What is the object of the combination of glycerine with the boracic acid?

A. They make together a superior product, the glycerine acting as a soft dressing to the wound, overcoming the natural roughness which results when a solution of boracic acid alone is used.

X Q. 27. The use of glycerine as you have described, those properties have been well known for many years—is not that true, as taken alone?

A. Yes.

X Q. 28. The same is true also, as to boracic acid, is it not?

A. It is.

THOS. B. STILLMAN.

Adjourned to Thursday next at 2 p. m., October 6, 1887.

Met pursuant to adjournment.

Counsel present as before.

Complainant's witness not being present, the examination of complainant's witnesses is by consent adjourned to October 8th at 12 m.

Complainant's time to take testimony is extended four days from October 4th, and defendants' time accordingly.

Adjourned to Saturday, October 8, 1887, at 12 m.

NEW YORK, *October* 8, 1887—12 m.

Met pursuant to adjournment.

Present: Counsel as before.

CHARLES G. AM ENDE, being called as a witness on behalf of the complainant and duly sworn, deposes as follows:

Q. 1. What is your name, age, residence and occupation?

A. Charles G. Am Ende, aged 38; I reside in the town of Union,

N. J., and am by occupation a manufacturing chemist. I am the complainant in this case, and the owners of letters patent No. 181,024, on which this suit is based.

25 Q. 2. Please tell us what, if any, success you have had with the borated cotton described in the said patent since the issue thereof in 1876, and to what uses it is put, to your knowledge, by those who buy or use it?

A. The borated cotton was first used in woven material for the protection of animal substances from decay or infection. The use of it for preserving meat in exportation was later succeeded by the use of ice for the same purpose. While the experiments of protecting animal substances for alimentary purposes were going on another field of use for this borated cotton opened in the protection of wounds, that is live animal tissue, from infection and the decay which in wounds is styled suppuration. Its success was quite extensive. This was introduced into most hospitals, in the private practice of physicians, who made public communications upon the efficiency.

Q. 3. Has it or not become a staple article for medicinal purposes?

A. Yes, sir.

Q. 4. Is it commented upon as a staple article for wound coverings in scientific works, if so, can you name some of them?

A. It has been in medical journals, but I don't remember the names just now.

Q. 5. Was public recognition given you for this invention in exhibitions, sanitary commissions, &c.; if so, can you name such?

A. There was at the Centennial Exhibition at Philadelphia, by the American Institute of New York, and the sanitary commission connected with the State fair of New Jersey.

Q. 6. Has it come into public favor in European medical institutions, if you know?

A. The Europeans are a little backward on it.

Q. 7. As a matter of fact has not your borated cotton proved a public blessing in the sense that it is a preventive of suppuration of wounds and in cases of amputation?

A. Yes, very frequently.

Q. 8. Was any borated cotton known to you before you made this invention?

26 A. No, sir; there was not.

Q. 9. Do you know whether the article sold as borated cotton by the defendants is saturated with boracic acid and glycerine?

A. I do.

Q. 10. I would like you to explain to the court what you understand by the term saturated?

A. The fibre of the cotton impregnated with a solution of boracic acid and glycerine.

Q. 11. Supposing the defendants did not use any glycerine but only boracic acid, what would be the difference?

A. The cotton would be of very little use—about as much as plain absorbent cotton for its purpose.

Q. 12. Why?

A. Because the organisms of infection and putrefaction are not destroyed by boracic acid undissolved.

Q. 13. Then I understand you to mean that the glycerine, being hygroscopic, keeps the boracic acid constantly in a state of solution, while without the glycerine the boracic acid would become dry on the cotton, and thereby useless; am I right?

A. You are.

Q. 14. Can you by inspection, touch and taste, tell this court whether the cotton contained in the package marked Complainant's Exhibit Stack Package No. 2 contains glycerine?

A. It appears to contain it.

Q. 15. Does it appear hygroscopic to the touch?

A. It appears moist and slippery to the touch.

Q. 16. Has it a sweetish taste?

A. Very weak.

Q. 17. How does it compare as to the external evidence of the presence of glycerine with your borated cotton?

A. Mine seems to be the least little bit moister; mine is just the least little bit sweeter.

Q. 18. Did you bring here a package of the borated cotton, such as you put up under the patent in suit?

A. Yes; I did.

The package produced by the witness is put in evidence by complainant's counsel and marked Complainant's Exhibit Gen-
27 uine Package, October 8, 1887, T. G., ex'r.

Q. 19. Can you satisfy this court by any demonstration that the borated cotton sold by the defendants is saturated with boracic acid?

A. By its greenish flame when burning. In addition to that its imperfect combustion demonstrates the presence of glycerine.

Q. 20. State whether the fact that glycerine is in the cotton, is not proof that the boracic acid must saturate the fibre?

A. It cannot help it.

Q. 21. Before bringing this suit did you notify the defendants and ask them to desist from infringing on your patent?

A. I did.

Q. 22. What did they answer?

A. Mr. Seabury told me the first time I ever had a conversation with him either that it was very well, or else that it was very lucky for me (I am not certain which) that I informed him of the patent, as it would save me a good deal of money.

Q. 23. Did he imply that he would not infringe any more?

A. Yes; that he would not infringe at all.

Q. 24. And yet afterwards you caused to be bought these packages here in evidence:

A. I did.

Cross-examination:

X Q. 25. You are the plaintiff in this action, are you not?

A. I am.

X Q. 26. You have stated that previous to taking letters patent you knew of a borated cotton; where did you get your information?

A. I don't remember any more.

X Q. 27. How long previous to the granting did you have such information?

A. Some time in July, 1876; about that time.

28 X Q. 28. When were the letters patent for your borated cotton granted?

A. August 15, 1876.

X Q. 29. Do you mean to state to the court that while you had an application pending for a patent borated cotton, that you saw or heard of a preparation styled borated cotton, and yet did not take sufficient interest in it to charge your memory with the source from which it came, or make a note of it?

A. I did not. The reason is that borated cotton is not termed exactly defining the article, but is of a generic, comprehensive significance. As borated cotton I have seen offered and sold cottons with borax in loose crystals, with boracic acid in loose crystals, with boracic acid dissolved in glycerine. The notice I referred to was of a so-called borated cotton, which spoke of cotton with borax exclusively. Such an article is of absolutely no value as an antiseptic. That is the reason I did not take any interest in it at all.

X Q. 30. Do I understand that you lay no claim to the term "borated cotton," but simply to the ingredients?

Objected to as beyond the scope of the investigation in this case, and therefore immaterial, and the witness is instructed that he need not answer the question unless he chooses to do so.

A. I decline to answer by advice of counsel.

X Q. 31. In general terms, I am to understand you claim this combination as an antiseptic, am I not?

Objected to as immaterial, as the claim of the patent speaks for itself, and the article claimed may be applicable to purposes other than antiseptic purposes.

A. It is very explicitly so described in the patent.

X Q. 32. For what purpose is the glycerine in your borated cotton used?

A. The glycerine is used simultaneously for keeping the boracic acid in solution upon and in the fibre of the cotton, for increasing the absorbing power of the cotton, for increasing also the filtering power of the cotton, and thus effecting the purpose of at the

29 same time giving out or spreading the boracic acid in solution upon the wound or flesh, producing a direct disinfection upon the tissue, absorbing moisture or exudation upon the flesh or the tissue, and disinfecting it, and further acting as a superior filter

against germs floating in the air whose passage it prevents mechanically, and which it kills when coming in contact with them.

X Q. 33. Is it not, as a matter of fact, the case that the addition of glycerine to cotton has been known for a long period to render the cotton hygroscopic?

A. Glycerine alone could never render cotton hygroscopic.

X Q. 34. Is it not well known that glycerine in combination with other agents would render cotton hygroscopic, but only with boracic acid?

Objected to as immaterial.

A. With other agents glycerine would not render the cotton hygroscopic.

X Q. 35. Then I understand you to state that boracic acid, when combined with glycerine, is the only combination known to chemistry which will render cotton hygroscopic?

A. It is not.

X Q. 36. Please state what other will.

A. Soda and water.

X Q. 37. Has it not been long known that a combination of cotton, glycerine and boracic acid would render the cotton hygroscopic?

A. No, sir; not before the patent.

X Q. 38. Is it not a fact that boracic acid has been long known as a preservative of animal and vegetable matter?

A. Yes. The Patent Office has granted me several patents on that same subject.

Defendant's counsel moves to strike out so much of the answer of the plaintiff as relates to the granting of patents in the last — as not responsive.

30 X Q. 39. Has not glycerine when combined with cotton been known as a preserving agent?

Objected to as indistinct because not limited to any time.

The question is amended by adding "prior to the patent in suit."

A. It is not a preserving agent at all and has not been known as such prior to the patent in suit, nor is it known to-day.

X Q. 40. The expert called by you, Dr. Stillman, in answer to the question, "For what purpose is the glycerine used?" answers: "It acts for two purposes: first, antiseptic and preservative; second, to produce a soft feeling to the cotton, without which the cotton would have a rough or hard feeling." And in answer to the question, "What is the object of the use of boracic acid?" answered: "As an antiseptic dressing, being much more powerful in this respect than glycerine alone." Is that answer correct?

A. Not altogether.

X Q. 41. In what is it incorrect?

A. In this: that the glycerine and cotton will not be sufficient to

counteract all the influences of all the elements of destruction which might be in contact with the surface. I understood the last previous question to inform me that glycerine and cotton were spoken of.

X Q. 42. Do I understand you to state that glycerine alone is not a preservative agent or antiseptic?

A. I wish to answer that question by a question. Preservative agent and antiseptic are two entirely different things.

X Q. 43. Is glycerine antiseptic or preservative?

A. It is used as a preservative. I do not consider glycerine as one of the substances that should be properly classified among the antiseptics.

X Q. 44. As a matter of fact, don't you know glycerine has been so classified?

A. I don't know.

X Q. 45. Does the addition of cotton to glycerine militate
31 against its efficiency as a preservative agent or as an antiseptic?

Objected to as indistinct because not expressing how the cotton is considered to be added in the question.

A. The question is so indistinct that I cannot answer it precisely.

X Q. 46. Does the combination of cotton with glycerine militate aginst the efficiency of glycerine as an agent in the dressing of wounds for the preservation of the animal matter?

Same objection.

A. I will explain as well as I can. The addition of cotton creates an entirely different state. Glycerine poured directly over a wound, and cotton with glycerine on it cannot be compared in effect.

X Q. 47. When cotton with glycerine on it, as expressed in your last answer, is applied to a wound, does the presence of cotton militate against its perservative effect?

A. It may and it may not.

X Q. 48. When will it?

Objected to as immaterial.

A. The question is too indistinct for me to answer it.

X Q. 49. Can you give some cases in which cotton such as used in the preparation of your borated cotton would have the effect of militating against the efficiency of glycerine as a preservative agent when applied to a wound or animal matter?

Same objection.

A. Yes, certainly.

X Q. 50. Am I to understand that cotton with glycerine on it, when applied to a wound is less beneficial in its effect or is less effective and valuable in the dressing of wounds than glycerine alone?

A. Cotton with glycerine on it, as I have stated before, differs in its mode of action absolutely and entirely from the glycerine.

X Q. 51. Is it less effective or not?

32 A. The effect is an entirely different one. I cannot compare one with the other at all.

X Q. 52. Do I understand you to decline to state which in your opinion is the most effective of the two?

Objected to as indistinct and immaterial.

A. It is impossible to answer it intelligibly.

X Q. 53. Why did you use cotton in your preparation termed borated cotton and for what effect, if you find it so difficult to speak of the relative merits of glycerine and glycerine combined with cotton as a preservative agent?

A. Because cotton acts mechanically and glycerine acts physically or rather physiologically.

Cross-examination closed.

CHAS. G. AM ENDE.

Sworn before me—

——— ———, *Examiner.*

(Complainant rests.)

33 NEW YORK, *January* 26, 1888—10 o'clock a. m.

Met pursuant to notice.

Present: Counsel as before.

Adjourned to Monday, January 30, 1888, at 10 a. m.

Circuit Court of the United States, Southern District of New York.

CHARLES G. AM ENDE
vs. } In Equity.
SEABURY & JOHNSON,

Testimony taken in rebuttal on the part of the complainant, under and pursuant to the 67th rule of the Supreme Court of the United States, as amended, before John A. Shields, Esq., a standing examiner of said court.

NEW YORK, *January* 30, 1888.

Present: Antonio Knauth, Esq., of counsel for complainant, and Westmoreland Davis, Esq., of counsel for defendant.

Mr. THOMAS B. STILLMAN, having first been duly sworn, testifies as follows:

Q. 1. Have you heretofore given some testimony for the complainant in this case?

A. I have.

Q. 2. Have you, since that time, made any examination with the miscroscope of the cotton contained in the package marked

34 Complainant's Exhibit Stack Package No. 2, for the purpose of ascertaining whether the boracic acid in or on the cotton

contained in said package was present in the form of crystals or in some other form or state?

A. I have. About a week ago I submitted a portion of a sample taken from said package, Stack No. 2, to examination under the microscope. No crystals could be found with the 150 diameter, and also as high as 400 diameters. The 400-diameter glass magnifies the article 400 times. If there were any crystals present they would probably be shown already under the 150-diameter glass.

Q. 3. Have you also made an examination with the microscope of cotton prepared by the complainant having the proportion of 100 grams cotton, 10 grams glycerine and 10 grams boracic acid, for the purpose of ascertaining the presence of boracic acid in crystals; if so, state the result?

A. I have. The examination being similar as to power of microscope of the other samples and no crystals were to be found.

Q. 4. The defendants' expert, Mr. S. W. Williams, states, in answer to cross-question 21, that "that portion of it (the boracic acid), soluble in the amount of glycerine present is presumably there as a liquid, the remainder is finely deposited onto the cotton fibres in a minutely crystalline deposit." Does this statement tally with your experience or does it not?

A. It does not.

Q. 5. State whether or not you are satisfied from the examinations made with the complainant's and the defendant's cotton that there are no crystals of boracic acid to be found in either?

A. I am satisfied that the crystals are not to be found in either.

Q 6. If the boracic acid in the cotton examined by you is not there in crystalline form, in what form or state is it present?

A. In solution.

Q. 7. Do you mean as liquid?

A. I do.

Q. 8. The defendants' expert answered to cross-question 28 of his examination, which was, "What are the relative proportions of boracic acid and glycerine used by the defendants?" "About equal parts."

He had also stated that according to some printed table one part of boracic acid is soluble in ten parts of glycerine, and that therefore in his opinion only one-tenth part of the boracic acid in defendants' cotton could be in state of solution, and the remainder in crystalline state?

Is that conclusion correct in your opinion?

A. It is not. The water or moisture absorbed by the glycerine from the air increases the solvent power of the mixture and prevents deposition of boracic-acid crystals.

Q. 9. Is, from the examination made by you the conclusion justified that glycerine in the manner used by the complainant and the defendants is capable of holding a solution of boracic acid of its own amount permanently in solution?

A. It is.

Q. 10. There is then a difference, if I understand you aright be-

tween the power of glycerine to dissolve boracic acid and its power to keep dissolved boracic acid in solution?

A. Yes, there is.

Q. 11. Has boracic acid in crystals any antiseptic qualities which can be compared with the antiseptic qualities of boracic acid in solution?

A. No.

Q. 12. If I should take absorbent cotton and steep it in a solution of boracic-acid, water being used to dissolve it, then dry the article, what would be the condition of the boracic acid in such article?

A. In a crystal-ized condition.

Q. 13. Such cotton so prepared would then not have the antiseptic power or quality of the article described and claimed in the patent in suit. Am I right?

A. You are correct.

Q 14. Have you ever heard of or seen any cotton in the market prepared as indicated in the last two questions?

A. I have not.

Q. 15. I call your attention to Defendant's Exhibit A, an
36 item in the "Druggists' Circular." Does that item convey to you any information concerning the preparation of boracic cotton beyond what is contained in the last three questions and answers?

A. It does not.

Q. 16. Would not the water used in such cotton to dissolve the boracic acid naturally evaporate and leave the boracic acid dry and in crystals on the cotton?

A. Being a hot saturated solution, upon cooling the boracic acid would crystal-ize out immediately.

Q. 17. Does glycerine decompose under certain circumstances?

A. It does. See "Allen's Organic Analysis," under head of "Glycerine," where certain bacilli in glycerine will act as ferments. I am under the impression that it is also subject to what is called cheesy ferment.

Q. 18. Does the presence of boracic acid dissolved in the glycerine prevent such fermentation or decomposition?

A. Its antiseptic properties would produce such a result.

Q. 19. Is it or is it not a fact that glycerine, to which a slight portion of water has been added, never dries?

A. Under ordinary conditions, that is a fact.

Q. 20. By the addition of the boracic acid in solution, water being the element of solution, the glycerine is then prevented from drying, if I understand you right, in complainant's and defendant's cotton?

A. That is correct.

Q. 21. Have you read the articles Defendant's Exhibits B and C in the American Journal of Pharmacy, and if so, state whether or not you find described in said articles the invention described and claimed in the patent in suit?

A. I have read the articles, but find no description of complainant's invention in either of them.

Direct examination closed.

Cross-examined by Mr. Davis:

X Q. 22. Will you please state what is the solubility of boracic acid in water at ordinary temperatures?

37 A. One part in ten in glycerine, one part in twenty-five in water—about.

X Q. 23. What amount of water or proportion of water will glycerine hold from evaporation?

Objected to as impossible to answer, inasmuch as defendant's expert has already testified that the amount of water absorbed by the glycerine from the atmosphere and held by it depends largely upon the amount of surface of the glycerine. The question is therefore indefinite.

A. My idea is it varies from about one-half its own weight to its own volume or more.

X Q. 24. Can you give an upward limit in general terms?

A. About twice its own volume, but this is pretty high.

X Q. 25. Is this the nearest approximation that you can make as a chemist?

A. The amount of the water absorbed is dependent on so many varying conditions that the approximation given from one-half its volume to its volume represents what I consider the amount without referring to the tables.

X Q. 26. Will glycerine remain dry upon the cotton if it be introduced into it without water unless the cotton is sealed hermetically?

A. It will not.

X Q. 27. Is then the water used in preparing boracic cotton necessary to prevent drying of the glycerine? Would not its hygroscopic properties prevent dryness?

A. This answer requires answering both questions at once. The water is necessary for the solution of boracic acid, and also to give the glycerine its water immediately, which it otherwise might not obtain at once by absorption of water from the air.

X Q. 28. The hygroscopic qualities of the glycerine would, however, prevent dryness, would it not?

A. It would.

X Q. 29. Please state within what limits glycerine is capable of attracting moisture, or what proportion of water glycerine will take up when freely exposed to the air.

38 A. It is a great absorbent of moisture—the exact amounts I could not give.

X Q. 30. Don't you think that it would take up from 30 to 50 per cent. of its weight?

A. I do.

X Q. 31. Has it not been well known as a fact to the chemical

world that glycerine is a strong solvent for certain antiseptics; for instance, benzoic acid?

A. It is.

X Q. 32. Was not this known prior to January 1st, 1876?

A. It was.

X Q. 33. Has it not been well known to the chemical world that glycerine was a solvent of boracic acid?

A. It has.

Cross-examination closed.

THOS. B. STILLMAN.

Adjourned to further notice.

NEW YORK, *March* 16, 1888—2 o'clock p. m.

Met pursuant to notice.

Present: Counsel as before.

Mr. CHARLES E. P. MEUMANN, a witness produced on the part of the complainant in rebuttal, having been duly sworn, deposes as follows:

Q. 1. Please state your name, age, residence, and occupation.

A. My name is Charles E. P. Meumann; age is 43 years; I reside in the city of New York; I am an apothecary.

Q. 2. What experience have you as an apothecary?

A. I am in the business now about 24 years, and am in business for myself since 1873.

Q. 3. Did you make any studies preparatory to your becoming a druggist, and if so, state what they were?

39 A. I studied chemistry and botany at the University of Berlin, Prussia; when I had ended my studies I served with an apothecary for several years, and then came to America where I became a clerk in apothecary's business and afterwards established my own business as such.

Q. 4. Are you also a manufacturer and chemist?

A. I am interested in a chemical manufactory and worked there myself in the laboratory for about a year and a half.

Q. 5. Have you read the patent in suit No. 181,024, and do you understand the same?

A. I have read it and I think I understand it.

Q. 6. How long have you known the borated cotton prepared by the complainant under this patent?

A. For at least eight years.

Q. 7. State if you know whether this article is generally considered a useful article and to what extent it has come to be used by the public.

A. It is considered to be a very useful article by druggists and physicians as well as by laymen; physicians prescribe it and the public call for it without prescription.

Q. 8. Have you ever, in your experience, known any cotton saturated with boracic acid alone and sold in the market as a commercial article?

A. I have heard of it but never handled it.

Q. 9. What would be the effect if cotton was treated with a solution of boracic acid alone, the acid being dissolved in water in the usual manner, after the article had become dry?

The defendant objects to any testimony given by the witness, an expert witness on chemistry, no sufficient basis having been laid therefor, and gives notice that at the proper time he shall move to have the same stricken out.

A. The effect would be that the boracic acid would appear in crystals on the fibre.

Q. 10. Do you give this last answer as a result of the knowledge as a chemist which you derived from your studies of chemistry?

A. Yes, sir.

Q. 11. Has boracic acid in crystals any preservative or antiseptic qualities?

The same objection.

A. It has not; it must be in solution to develop that quality.

Q. 12. Have you read the article marked Defendant's Exhibit A, and if so, state how the cotton therein referred to compares with the borated cotton made under the patent in suit?

The same objection.

A. I have read a copy of this article and think the cotton prepared in the manner described in the article would act the same as Mr. Am Ende's cotton, provided it be used immediately after immersion.

Q. 13. Why?

A. Because if it was left to be dry before using it, it would not be satisfactory.

Q. 14. Do you gather from this article whether this dressing of lint referred to in the article was applied to the wound dry or wet?

Same objection, and the further objection that the exhibit in question being in writing speaks for itself as to its terms.

A. I understand the wording of this article, so that the bandage has been applied to the wound immediately after immersion in a still wet state.

Q. 15. Suppose that is was applied in a dry state, could it then be effective?

The same objection.

A. I think that its effect would have been a great deal lessened, because the boracic acid being in a crysta-lized state on the fibres of the bandage in question could not act so energetically as if it had been in solution, inasmuch as only that small part of boracic acid which was able to dissolve in the moisture of the wound could have the desired disinfectant action.

41 Q. 16. When such cotton in a dry state was applied to a dry surface and not a wound, would it have any antiseptic effect?

The same objection.

A. No, sir.

Q. 17. Can cotton which has not been specially made absorbent be saturated with glycerine by pouring a small quantity of glycerine over a square sheet of wadding and afterwards expressing it?

A. No, sir; it cannot.

Q. 18. Does glycerine, by saturating cotton with it, render the cotton permeable to all medicinal liquids or not?

The same objection.

A. If cotton is really saturated with glycerine, this glycerinated cotton would be permeable to all those liquids that have no chemical action on either glycerine or cotton.

Q. 19. Can you name me some medicinal liquids to which it would not be permeable in this condition?

A. Solution of permangan-te of potash, solution of chromic acid, nitric acid, sulphuric acid, chlorine water.

Q. 20. How would such cotton be affected by ether?

The same objection.

A. Ether would wash out the glycerine and leave the cotton intact.

Q. 21. How would it be affected by a solution of potash?

The same objection.

A. It would be destroyed.

Q. 22. How would it be affected by picric acid or pricrate of ammonia?

The same objection.

A. It would be decomposed.

Q. 23. Would such glycerinated cotton be permeable to nitrous acid in solution?

The same objection.

42 A. No, sir; it would be destroyed as well.

Q. 24. Would it be permeable to any of the liquids which have been mentioned in the last five questions and answers?

The same objection.

A. No, sir.

Q. 25. Then it is not true that glycerinated cotton is permeable to all medicinal liquids?

The same objection.

A. Not to the whole extent of this statement?

Q. 26. Can raw cotton be more easily saturated with a solution of boracic acid and glycerine than with glycerine alone?

The same objection.

A. Yes, sir; because the obstacle in raw cotton for saturating it with water liquids is a fatty matter which pervades the natural fibre; boracic acid has the property to partly dissolve fatty matter, while glycerine has not.

Q. 27. I read you from the testimony of the complainant, cross-question and answer 32, which are as follows:

"X Q. 32. For what purpose is the glycerine in your borated cotton used?

A. The glycerine is used simultaneously for keeping the boracic acid in solution upon and in the fibre of the cotton, for increasing the absorbing power of the cotton, for increasing also the filtering power of the cotton, and thus effecting the purpose of, at the same time giving out or spreading the boracic acid in solution upon the wound or flesh, producing a direct disinfection upon the tissue, absorbing moisture or exudation upon the flesh or the tissue and disinfecting it, and further acting as a superior filter against germs floating in the air whose passage it prevents mechanically and which it kills when coming in contact with them."

Do your views coincide with or differ from the above statement?

A. Yes, I coincide with the answer.

43 Q. 28. Do you know what boro-glycerine is?

The same objection.

A. Yes; it is a chemical combination from the elements of glycerine and boracic acid, forming a glossy hard body, hygroscopic, dissolving slowly but completely in water, which solution contains again the glycerine and boracic acid.

Q. 29. How long has this boro-glycerine been known?

The same objection.

A. For the last three or four years to my knowledge.

Q. 30. Is it a new chemical substance, or is it simply a mixture of boracic acid and glycerine?

The same objection.

A. I regard it as a new chemical substance.

Q. 31. How does this substance contained in the fibre of the borated cotton made under the patent in suit compare with it?

The same objection.

A. I regard it as principally one and the same thing; although the boro-glycerine is made by superheating together boracic acid and glycerine, my own experiments have shown me that a very similar, if not the same, substance can be got at by mixing equal parts of glycerine and boracic acid and exposing it in thin layers to moderately warm air.

Q. 32. Did you mean boracic acid in solution when speaking of boracic acid in your last answer?

The same objection.

A. Not necessarily, because glycerine alone is sufficient to dissolve boracic acid.

Q. 33. Does glycerine decompose under certain circumstances?

The same objection.

A. Yes, sir; we have mentioned some chemical liquids before that will decompose it.

44 Q. 34. How is it affected by contact with yeast and cheese ferment?

A. I don't know about yeast; cheese ferments will ferment the glycerine, two of the products of fermentation being formic and propionic acid.

Q. 35. Would boracic acid counteract such decomposition of the glycerine?

A. Yes, sir; because it arrests fermentation.

Direct examination closed.

Adjourned to Monday, March 19, 1888, at 10 a. m.

NEW YORK, *March* 19, 1888—10 o'clock a. m.

Met pursuant to adjournment.

The cross-examination of MR. CHARLES E. P. MEUMANN by W. DAVIS, Esq.:

X Q. 36. How long a time did you study botany and chemistry in the University of Berlin, Prussia?

A. For two years.

X Q. 37. In answer to question 10 on your direct examination, which question is as follows, "Do you give this last answer as the result of your knowledge as a chemist, which you derived from your study of chemistry?" To which you answered, "Yes, sir." Did you mean to say that the answer in regard to which you were interrogated was based upon your studies in Berlin?

A. When I completed my studies in the college of Berlin I did not stop to acquire knowledge afterwards, so my present knowledge of chemistry is just as well the result of my studies at that time as of my after studies and experience after that time.

X Q. 38. Under whom did you conduct your studies after you left Berlin?

A. Under no particular person. I conducted my studies by keeping up with the daily chemical literature and by experience as I derived it from my business pursuit.

45 X Q. 39. Since you left Berlin you have been actively engaged as an apothecary, have you not?

A. Yes, sir.

X Q. 40. In answer to question 12 of your direct examination, where you state that you had read Defendant's Exhibit A, and think the cotton prepared in the manner therein described would act the same as Mr. Am Ende's cotton, provided it be used immediately after immersion; and in your answer to the following ques-

tion, that if left to dry it would not act satisfactorily. Now, as a matter of fact, does not glycerine in its addition by preventing this objectionable dryness simply make permanent the properties of the wet dressing which you say acts like Mr. Am Ende's cotton?

A. It would indeed, for by adding glycerine you would have the identical Am Ende's borated cotton.

X Q. 41. In answer to question 19 upon your direct examination you give permanganate of potash, chromic acid, nitric acid, sulphuric acid, as medicinal liquids which could not permeate cotton. Would not weak solutions, say one per cent., permeate the cotton without destroying the fibre?

Objected — as immaterial

A. Partly, yes, partly, no, especially the permanganate of potash is even in the weakest solution incompatible with glycerine.

X Q. —. Does the destruction of the cotton show that the liquid that has attacked the fibre has permeated the cotton, or that it has not?

A. It is impossible to answer this question straight, some liquids will destroy the fibre at immediate contact so as to say before permeating, some others will destroy the permeated fibre, thereby leaving no fibre to be permeated any more.

X Q. 43. Can a liquid of sufficient strength — destroy cotton fibre be properly regarded as medicinal liquid before dilution?

A. Yes, sir, because cauterizing liquids that are strong enough to destroy animal tissue are applied for that purpose, are medicinal indeed.

46 X Q. 44. In answer to question 20 of your direct examination, you state that ether would wash out the glycerine and leave the cotton intact, how would that be brought about?

A. Glycerine is insoluble in ether, therefore glycerine cannot be dissolved out by the ether, but as ether is a liquid which dissolves the fatty matter in raw cotton, it will permeate cotton however prepared, and when you put a pellet of glycerinated cotton into the stem of a funnel and pour ether on top the ether permeating the cotton fibre will mechanically shove out the glycerine and put itself in its place.

X Q. 45. What proportion of boracic acid and glycerine are used in preparing boro-glycerine, are any definite proportions required?

A. To make the commercial article boro-glycerine there are definite proportions of both constituents necessary. To make 100 parts of boro glycerine the manufacturer uses 50 parts of boracic acid and from 61 to 65 parts of glycerine according to the concentration of the same. The products then will weigh 100 pounds.

X Q. 46. Can boro-glycerine be prepared at or below a temperature of boiling water (212° Farnt.) say at 150° Farnt.?

A. By exposing the constituents for some time to a constant elevated temperature a little below the boiling point of water, they unite together to a body that is very similar if not the same as boro-glycerine.

X Q. 47. What do you mean by a little below the boiling point of water?

A. I meant the temperature stated in the question.

X Q. 48. Can boro-glycerine be produced in the presence of water?

A. I don't think it can in the presence of much water, but will form as soon as water is evaporated.

X Q. 49. Will water evaporate fully from cotton when glycerine is present?

A. Yes, sir; provided the surrounding air be dry.

X Q. 50. Will not the hygroscopic property of the glycerine provide for the taking up of water in ordinary air unless hermetically sealed?

47 A. Yes, sir.

X Q. 51. As water is used in preparing borated cotton, and the glycerine provides for the taking up of water, can boro-glycerine or any chemical compound of glycerine and boracic acid be formed in making borated cotton, water having been present throughout the process?

A. Yes, sir; because to finish the borated cotton a drying process is necessary, depriving the cotton of the water that, when present, would destroy the formed boro-glycerine.

X Q. 52. What evidences can you give that there is such a combination?

A. The evidence is a microscope. On borated cotton properly prepared no crystals of boracic acid are visible on the fibre which are visible on cotton that has been dipped into plain solution of boracic acid without glycerine and afterwards dried.

X Q. 53. Can you give other evidence?

A. An evidence for the presence of boracic acid in borated cotton is that it burns with a green flame when lighted. A microscope is the only evidence of the combination having been formed between the two substances.

X Q. 54. In what proportions will glycerine and boracic acid combine chemically?

A. To make the proper combination, 50 parts of boracic acid and 61 to 65 of glycerine, according to the concentration of the commercial article.

X Q. 55. Can a chemical combination be produced by equal parts?

A. Yes, sir; it would contain a little free boracic acid which would not impair the usefulness of the article.

X Q. 56. If 15 parts of boracic acid be dissolved in 100 parts of hot water, 15 parts of glycerine added, and the solution allowed to cool to ordinary temperature, say 60° Fahrenheit, will any acid be deposited in crystal?

Objected to as indefinite because not stating whether the parts are parts by weight or volume.

The question is amended by adding the words "by weight" after the word "parts" in the question.

48 A. Yes, sir. I judge about 10 parts, more or less, might crystal-ize.

X Q. 57. By what process of reason do you arrive at that conclusion?

A. Because boracic acid is at ordinary temperature soluble in about 25 parts of water, and the glycerine added to the water does not materially increase the solubility, since the combination between glycerine and boracic acid does not form in presence of so much water.

X Q. 58. What is the solubility of boracic acid and glycerine at ordinary temperature?

A. Glycerine dissolves boracic acid at ordinary temperature, nearly equal parts, forming boro-glycerine.

X Q. 59. In answer to cross-question 56 you state that you judge about 10 parts, more or less, of boracic acid might crystal-ize; about what per cent. of the boracic acid would be deposited?

A. About two-thirds. That is, about 66 per cent.

X Q. 60. If this same solution were allowed to cool and evaporate as far as it would on cotton fibre, would there be a deposition of crystals there?

A. Under the supposition that equal parts by weight of boracic acid and glycerine are used to make a solution, there would be a little too much boracic acid present. If this solution then cools and dries on cotton fibre, my judgment of the matter is that on cooling microscopical minute crystals will appear on the fibre, which will disappear again slowly during the drying process until finally a very small quantity of crystal-ized boracic acid will remain which could not be united with the glycerine, but if the glycerine could be only a little increased in quantity in the original solution the crystals would disappear entirely, say about 16 parts of glycerine for 15 parts of boracic acid.

X Q. 61. How long would it take, at ordinary temperature, 16 parts of glycerine to dissolve 15 parts of boracic acid?

A. That depends on the division of the surface. Put together in a flask it might not unite at all. Spread out on a plate it takes about 2 days. Divided on cotton fibre it will unite during the short time which is necessary to evaporate the water needed for soaking the cotton.

49 X Q. 62. In answer to cross-question 60 you state minute crystals will appear on the fibre which will disappear again slowly during the drying process. Does the deposition before drying amount to the percentage given by you in answer to cross-question 59?

A. Certainly, but the whole statement is a hypothetical judgment.

X Q. 63. Don't you know that many eminent chemists hold that what is known as boro-glycerine is not properly speaking a chemical compound?

A. I know that. The whole matter is yet little investigated. Every chemist has his opinion about it and I have mine. I hold that it is a real chemical compound and base this opinion upon the

fact that 50 parts of boracic acid and 61 parts of glycerine of highest concentration form only 100 parts of a hard pellucid body known by the name of boro-glycerine.

X Q. 64. I am to understand then that in the face of the fact that many eminent chemists deny that boracic acid and glycerine will combine at all chemically, you are of opinion they will combine at ordinary temperature?

A. Yes, sir; my experiments have shown it to me.

X Q. 65. Does the examination with a microscope show anything more than that the boracic acid is in solution, if that.

A. The examination with a microscope shows only the absence of crystals on "borated cotton" when properly prepared.

X Q. 66. If 61 parts of glycerine and 50 parts of boracic acid combine to form 100 parts of boro-glycerine, what became of the 11 parts of the substance?

A. The matter has yet been little investigated, both constituents contain the elements of water even when they are in what the chemists call an anhydrous state. It is highly probable that the loss of substance is brought about by the elimination and evaporation of those elements in the form of water.

X Q. 67. Do you mean to state that this breaking up of compounds and elimination of elements could take place at ordinary temperature?

A. Yes, sir.

50 Redirect by A. KNAUTH, Esq.:

R. D. Q. 68. Does the substance which you have called boro-glycerine dissolve immediately upon coming into contact with water?

Defendant's counsel objects to any testimony given by the witness, as a chemical expert, upon the ground that no sufficient knowledge or experience has been shown on the part of the witness, and gives notice that the same objection is made to any further questions that may be asked of the witness, the answer of which will necessitate the knowledge of an expert.

A. This substance acts in this way similar to what gum arabic would, that is to say, in very thin layers or distributed on fibres it dissolves at once, but in the form of a lump it dissolves very slowly.

R. D. Q. 69. How does it, in this regard, compare with crystals of boracic acid?

A. It is much more soluble.

R. D. Q. 70. When this substance, boro-glycerine, is dissolved in the usual manner, what substances are found?

A. The solution of boro-glycerine is in every way identical with a plain solution of boracic acid with an addition of glycerine.

R. D. Q. 71. Is water commonly used to dissolve the boro-glycerine?

A. Boro-glycerine is used medicinally in two ways. One way is simply dissolved in water; the other way dissolved in a compara-

tively small amount of glycerine, making a solution called glycerite of boro-glycerine. The latter solution keeps clear, but is decomposed also by the addition of water.

R. D. Q. 72. Doctor Stillman, who analyzed the "borated cotton" of the defendants, used water in the process of analysis and obtained boracic acid and glycerine besides the cotton; would such a result be also the natural result, if the substance present in defendants' cotton was boro-glycerine, as you suppose?

A. Yes, sir.

51 R. D. Q. 73. Then by the addition of a large amount of water to the boro-glycerine, the boracic acid and the glycerine are again brought into their former state; is this correct?

A. Yes, sir.

R. D. Q. 74. Can the boracic acid take up more than one atom of water from the glycerine during its process of chemical union?

A. The whole matter of the boro-glycerine is not yet carefully and thoroughly investigated. It is very possible that more than one combination between boracic acid and glycerine may form eliminating, respectively one, two or three atoms of the constituent elements of water in the glycerine.

R. D. Q. 75. What did you mean by your answer to cross-question 62? (The cross-question 62 and answer read to the witness.)

A. I meant by that that as the proper quantities of glycerine and boracic acid necessary to make the commercial article of boro-glycerine are 50 boracic acid and 61 glycerine, I judge theoretically that a larger amount of boracic acid will probably crystal-ize out and not unite chemically with the glycerine. Practical, careful experiments with microscope in hand may show differently, however.

R. D. Q. 76. Doctor Stillman has testified that after repeated examinations of complainant's and defendant's cotton with a strong microscope he failed to find any crystals of boracic acid therein. How do you account for such total absence of any crystals of boracic acid?

A. I can't account for it in any other way; that there may be different combinations between boracic acid and glycerine, as I have heretofore said.

R. D. Q. 77. If I understood you correctly when 15 parts of boracic acid and 15 parts of glycerine was used with 100 parts of water, only a minute portion of the acid might be present in crystals on the cotton. Could these crystals be affected by the moisture drawn from the air through the hygroscopic action of the glycerine or by the glycerine itself?

A. Yes, sir; it is very probable that the little amount of water drawn into the cotton by the hygroscopic action of the medi-
52 cal substance thereon would be sufficient to keep the little amount of free boracic acid in constant solution, thereby preventing any crystals to appear at all.

Answer objected to on the ground that it is irresponsive; the

question being as to hygroscopic effect of glycerine: the answer as to the hygroscopic effect of the alleged substance.

R. D. Q. 78. Is it also possible or not that this slight excess of boracic acid may combine with the glycerine in some manner not definitely known to science at present by substituting more than one atom of water?

A. Yes, sir; it is.

R. D. Q. 79. Is it a fact, that in combination with several fats and oils all three constituent atoms of water in the glycerine are substituted by fatty acids?

Objected to as immaterial.

A. Yes, sir; it is.

R. D. Q. 80. Does glycerine contain three atoms of water in its elementary composition?

A. Yes, sir.

R. D. Q. 81. Have you made special studies with reference to glycerine and boracic acid, and more so than it is the usual practice of ordinary chemists?

Defendant's counsel objects to so much of the question as forms a conclusion in regard to the amount of study of the subjects of glycerine and boracic acid usual among ordinary chemists.

A. I did not make practical or theoretical studies about these bodies more than is wanted for a general study of chemistry, but I have manufactured for a short period the commercial boro-glycerine.

R. D. Q. 82. Is boro-glycerine held to be a new chemical substance by the majority of the profession?

A. The substance is not longer than five or six years in
53 the market. I don't know what the opinion of the majority of chemists is on the subject.

Redirect examination closed.

CHAS. S. P. MEUMANN.

Sworn — before me—

_____,

Examiner, &c.

Adjourned to Wednesday, March 21, 1888, at 2 p. m.

NEW YORK, *March* 21, 1888—2 o'clock p. m.

Met pursuant to adjournment.

Present: Counsel as before.

Mr. CHARLES G. AM ENDE, recalled, testifies as follows:

Q. 54. How long have you been aware that the defendants' firm of Seabury & Johnson manufactured borated cotton and sold it on the market?

A. Seabury & Johnson have been manufacturing cotton which they named borated for many years, but it was a cotton with loose

crystals of boracic acid, which did not infringe upon the patent. The attention of the trade has at repeated intervals been called to the fact that borated cotton, in order to be efficient, must hold the boracic acid dissolved. The actual infringement I only became aware of a few weeks before the suit was brought.

Q. 55. Did you not take pains during the time that defendants' article was in the market, which as the witness Williams testifies has been about two years, to ascertain whether the defendants' cotton was made in infringement of your patent?

A. I had been accused of having killed, by poisoning, two young ladies, and had found and obtained absolute, conclusive proof that by this charge had been covered up three murders, the sec-
54 ond of which became necessary to cover up in the course of operation the first one, and the third one of which had apparently been committed to cover up the impossibilities which had occurred by delaying the second one. The efforts to bring this out and have the matter investigated by our courts, all of which efforts proved futile by the determined opposition of a high official and the influential murderers; the hardships accruing to me by the persecution to which I was subjected, in order to plead guilty to the charge; the ruin of my business, of my honor and my good name; the prostration and subsequent death of my father from the shock, and the further misfortune of a fire which destroyed my factory, had so upset me that I paid but very little attention to anything.

Q. 56. You mentioned on your former examination, that the invention of the patent in suit had been honored with a diploma by the American institute. Is the diploma which is now before you the one which you referred to in your testimony?

Objected to as immaterial and incompetent.

A. Yes, sir; it is one of them, it is the second; the first was given in 1877, and this was given in 1878, for continued excellence, and on the further ground that the signatures of the officers are not proved.

The same objection.

The diploma is offered in evidence, and marked Complainant's Exhibit American Institute Diploma, March 21, 1881, J. A. S., ex'r.

Q. 57. You have also stated that you have received many communications showing the appreciation of the public, physicians, scientists and hospitals of the invention of the patent in suit. Can you refer us more specifically to some of these communications?

This question objected to on the grounds that it calls for a conclusion of law.

A. Communication from Professor James L. Little, who was professor of the University of Vermont and Post-graduate School of New York; from Professor T. S. Hayne, of Chicago; from
55 Doctor Thomas Hay; from Doctor J. J. Hanne; from Doctor Woodward, Burlington, Vermont; Doctor W. L. Elder, Doctor

R. F. Chabert, St. Mary's hospital; Doctor J. E. Reed; from Doctor Engleman, professor of obstetrics in St. Louis, who says: "I cannot sufficiently express my gratitude to Am Ende, the Hoboken chemist, whose fertile brain has furnished us with the useful preparations now in the market." Doctor Thomas Hay, of Philadelphia, wrote:

"In gynæcological practice and office surgery this borated cotton fills a void long felt. It is thoroughly detergent, and it possesses such high healing virtues that I have been astonished at the rapidity of the healing process under its use, and the pleasant and agreeable results attained by it.

"THOMAS HAY, M. D.,
"1127 *North St., Philadelphia, Pa.*"

Medical journals have reported about it very favorably, too.

Direct examination closed.

Cross-examined by W. DAVIS, Esq.:

X Q. 58. Were the communications referred to by you in answer 57 in writing?

A. They were all in writing except this one from Doctor Engelman and that from Doctor Little, which were sent to me in print. Little also made verbal communications to me. Some of the others may have made verbal communications to me.

X Q. 59. I now show you your answer to question 57; please state which of the communications referred to therein were in writing, and which were verbal.

A. None of the communications referred to were verbal; all those not stated as printed were in writing.

X Q. 60. Then when you answered question 57 of your direct examination, had you the original communication alleged by you to have been received from the sources named in your answer before you or with you?

A. The original letters, which are not produced here, have been burned in a fire mentioned before, which destroyed my fac-
56 tory. I had copied those extracts from the original letters, had them printed and on some circulars contained in a different building, and thus saved, these printed copies have been preserved.

Defendant's counsel moves to strike out so much of the answer of the witness to question 57 of his direct examination as relates to written communications received by him, upon the ground that his testimony in regard thereto is not the best evidence, and gives notice that he will move at the proper time to have the same stricken out.

CHAS. G. AM ENDE.

Sworn — before me —

_____,
Examiner, &c.

Adjourned till to-morrow at 3 p. m.

NEW YORK, *March 23d*, 1888—3 o'clock p. m.

Met pursuant to adjournment.

Present: A. v. Briesen, Esq., of counsel for complainant, and W. Davis, Esq., of counsel for defendant.

MR. REINHOLD VANDER EMDE, a witness produced on the part of the complainant, being duly sworn, deposes as follows:

Q. 1. Please state your name, age, residence and occupation.

A. Reinhold Vander Emde, age forty-six years. I reside at No. 40 Second avenue, New York city. I am a druggist at 323 Bowery.

Q. 2. How long have you been a druggist in New York?

A. In New York since 1867.

Q. 3. Please look at the package of complainant's borated cotton now shown you (showing witness Complainant's Exhibit Genuine Package), and state what you know of such borated cotton and the extent of its use in the market.

57 A. These packages are put up by Mr. Am Ende. I have handled these goods since about seven or eight years, and I know that there has been quite a demand for it, having been and being yet prescribed by several physicians of note. So far as I know, they are mostly used for surgical purposes.

Q. 4. Please state whether or not this borated cotton has had an extensive sale.

A. Yes, sir; it has had and still has.

Q. 5. What would be the effect upon the profession if borated cotton made by other manufacturers were put upon the market?

A. I do not think it would be a very favorable one, because the physicians generally prefer the original article, knowing what it contains.

Q. 6. Can you name some of the physicians who have used this borated cotton by purchasing it of you?

A. Doctor Frederick Lange and Doctor A. G. Gerster.

Q. 7. Before you handled Mr. Am Ende's borated cotton, did you ever know of any other borated cotton in the market?

A. No.

Q. 8. And did you know of any other substance, prior to Mr. Am Ende's borated cotton coming into use, that would perform the functions of his borated cotton?

Defendant's counsel objects to any testimony given or — may be given by the witness as a chemical expert or chemist on the ground that no foundation has been laid for such.

A. I do not know of anything else in the cotton line.

Q. 9. What came nearest in any other line, so far as you know?

A. I think there has been used carbolated cotton before, but I am not sure that it was before Mr. Am Ende's borated cotton came into use.

Cross-examined by W. DAVIS, Esq.:

X Q. 10. How many stores have you?

A. One.

58 X Q. 11. What does this "extensive" sale, to which you have referred, of complainant's borated cotton amount per day from your store?

A. Extensive in the proportion of the business I am doing.

Defendant's counsel moves to strike out the answer as not responsive.

X Q. 12. What amount do your daily sales of the complainant's borated cotton average?

A. I couldn't state.

X Q. 13. Can you give it in round numbers or approximate it?

A. I could not without referring to my books.

X Q. 14. How many assistants have you in your store?

A. Three besides myself.

X Q. 15. In your answer to question 5 on your direct examination you state as follows:

"I do not think it would be a very favorable one, because the physicians generally prefer the original article, knowing what it contains." Do you state this of your own knowledge?

A. Of course.

X Q. 16. You have spoken to physicians generally on the subject?

A. I did not.

X Q. 17. Have they spoken to you upon the subject?

A. No.

X Q. 18. Then it is supposition that you made?

A. It is my experience.

X Q. 19. Please state on what you base your experience?

A. My carrying on the business for 31 years.

X Q. 20. Does the fact that you have carried on business for 31 years show you that physicians generally prefer the complainant's cotton?

Complainant's counsel objects to the question on the ground that it misinterprets the witness' testimony.

A. As I am only handling complainant's cotton for about 8 years I cannot have any 31 years' experience on the article.

59 X Q. 21. Does your experience, then, of eight years in handling complainant's cotton, show you that physicians generally prefer it?

A. Yes.

X Q. 22. How?

A. In regard to demand.

X Q. 23. I understand you, then, to state that the demand is the basis for your answer, and that only?

A. Yes.

X Q. 24. Do physicians purchase this in person?

A. Sometimes.

X Q. 25. But not as a general thing?

A. They send for it too.

Defendant's counsel moves to strike out the answer as irresponsive, and moves to strike out the answer, and repeats the question. Objected to as already answered.

A. As a general thing, they do not call for it in person.

X Q. 26. As a matter of fact, is it not your best recollection that you used carbolated cotton before you used complainant's borated cotton?

A. I do not recollect.

REINHOLD VANDER EMDE.

Sworn — before me—

——— ———,
Examiner, &c.

(Complainant rests.)

COMPLAINANT'S EXHIBIT STILLMAN REPORT. September 26, 1887. T. G., Ex'r.

AM ENDE
vs.
SEABURY & JOHNSON.

STEVENS INSTITUTE OF TECHNOLOGY,
HOBOKEN, N. J., *May 22d*, 1887.

C. Am Ende, Esqr., town of Union, N. J.

DEAR SIR: The sample of borated cotton, marked "Seabury & Johnson," has been analyzed by me, and I find it
60 to contain boracic acid and glycerine.

The amount of the former is approximately 13 per cent.; the amount of the latter 9.5 per cent.

Respectfully yours, THOS. B. STILLMAN, PH. D.,
Prof. Analytical Chemistry, Stevens Institute of Technology.

COMPLAINANT'S EXHIBIT AMERICAN INSTITUTE DIPLOMA. March 21, 1888. J. A. S., Ex'r.

Diploma Awarded by the American Institute to Charles G. Am Ende for Chemical Preparations for Dressing Wounds.

Having received the medal of excellence in 1877—
This diploma for continued excellence is awarded to him at the exhibition of 1878.

NATHAN C. ELY, *Pres't.*

C. McK. LEVIN, *Rec'g Sec'y.*
——— ———, *Cor'g Sec'y.*

New York, Nov., 1878.
[SEAL.]

61 UNITED STATES PATENT OFFICE.

CHARLES G. AM ENDE, of Hoboken, New Jersey.

Improvement in Composition of Borated Cotton for Preserving.

Specification forming part of Letters Patent No. 181,024, dated August 15, 1876; application filed April 17, 1876.

To all whom it may concern:

Be it known that I, Charles G. Am Ende, of Hoboken, Hudson county, New Jersey, have invented new and improved borated cotton, of which the following is a specification:

This invention has for its objects to combine the various advantages of cotton-fiber with those possessed by boracic acid and glycerine for preserving animal and vegetable matter from decay.

Heretofore boracic acid has been used as a preservative agent in a fluid state, and also as a powder. In use, the matter to be preserved had to be immersed in the solution of boracic acid, or completely covered with the powder. In either case, a very large quantity of boracic acid was used.

My present invention, which consists in saturating cotton-fiber with boracic acid and glycerine in a manner hereinafter described, enables me to apply a very small proportion of boracic acid and glycerine to the cotton-fiber with fully as good an effect as though the matter to be preserved were entirely embedded in large quantities of the solution or powder. It enables me, at the same time, to utilize the germ-filtering properties of the cotton, and its elasticity as a superior material for packing or covering delicate tissue.

I produce my improved borated cotton as follows: I first prepare a solution of boracic acid in the usual manner, and add thereto a small proportion of glycerine. For the preservation of tender substances, such as veal, I may also add from ten to forty per cent. of soda or potash, never sufficient, however, to reach neutrality. The cotton, either in bulk or wadding, is next immersed in the solution until well impregnated therewith, and then pressed, to discharge all surplus solution, or so much thereof as may be required. The cotton is then dried and ready for use.

When applied to the material to be preserved, either as a covering or as a wrapping or packing, the cotton will constitute a filter for keeping germs of putrefaction from passing through, and the boracic acid absorbed by the cotton will, at the same time, preserve the surfaces from decay, and counteract all injurious influences of germs, or other elements of destruction, already in contact with such surfaces.

The glycerine is added to increase the preserving power of the borated cotton. It renders the cotton slightly hygroscopic, thus aiding in the diffusion of the acid and in the preservative effect of the prepared cotton.

I have found that the impregnated fiber shows, even under a

good microscope, no difference from a fiber not impregnated with boracic acid, and that, therefore, although a very thin film of acid may adhere to the exterior surface of the fiber, the main proportion of the acid is absorbed by and diffused within the fibers. In consequence, the acid can, in use, be but gradually released from the fiber, and will thus produce a constant and lasting effect.

I claim—

The borated cotton, being cotton fiber which is saturated with boracic acid and glycerine, substantially as herein shown and described.

The foregoing description of my invention signed by me this 5th day of April, 1876.

CHAS. G. AM ENDE.

Witnesses:
ERNEST C. WEBB.
A. MORAGA.

62 Circuit Court of the United States for the Southern District of New York.

CHARLES G. AM ENDE }
vs.
SEABURY & JOHNSON. }

Testimony taken before John A. Shields, examiner, on the part of the defendants, under and pursuant to the 67th rule of the Supreme Court of the United States, as amended.

NEW YORK, *December* 8, 1887.

Present: John L. Logan, Esq., on behalf of defendant; Antonio Knauth, on behalf *for* complainant.

Q. 1. S. W. WILLIAMS, witness on the part of the defendant, having first been duly sworn, testifies as follows:

Q. 2. What is your business?

A. Professional chemist for Seabury & Johnson.

Q. 3. How long have you been in this business?

A. Two years.

Q. 4. How long have you been connected with chemistry?

A. I was graduated by the Michigan University School of Pharmacy 1881, was assistant in the college laboratories for school year 1881–'82; from the spring of 1883 until January, 1886, I was connected with the Drug News, Druggists' Circular and Oil, Paint and Drug Reporter, and then I became chemist for Seabury & Johnson.

Q. 5. Do you know an article manufactured by Seabury & Johnson and known as Seabury & Johnson's borated cotton?

63 A. I do.

Q. 6. Do you know the ingredients?

A. I do.

Q. 7. In the complainant's testimony, page 10, Q. 11 reads as follows: "Please state what examination you made with the first

package opened and examined by you, and also the results of such examination" and the answer thereto, "I was requested in the note with which the package was sent to examine the material, especially for boracic acid and glycerine. I found those present, the amounts of which are stated in my written report to Mr. Am Ende. And Q. 13, on the same page: "How did you find the boracic acid and glycerine to be present in the cotton; I mean in what condition?" and the answer thereto: "As glycerine, and as boracic acid, the latter soluble in the former, with a small amount of water. Is this the way in which these ingredients are found in Seabury & Johnson's borated cotton?

A. Yes, it is; as boracic acid and glycerine.

Q. 8. Just explain the manner of preparing this borated cotton?

A. Boracic acid is dissolved in hot water, and sufficient glycerine added to render the cotton when impregnated with this liquid soft and slightly moist, after the process of drying, as is done in antiseptic dressings whether medicated with boracic acid, or any other antiseptic.

Q. 9. What is the object of the use of the boracic acid in this aggregation?

A. As an antiseptic.

Q. 10. Has the use of boracic acid, as an antiseptic dressing, been known prior to the date of the complainant's application for a patent on borated cotton; that is, prior to April 17, 1876?

Objected to as incompetent.

A. It was.

Q. 11. Please state upon what you base the above answer?

Complainant's counsel objects to any testimony which may
64 be given by the witness for the purpose of anticipating the invention of the patent in suit, because the witness' name is not set up in defendant's answer, and he gives notice that at the proper time therefor he will move the court to strike out any testimony of that character which the witness may hereafter give.

A. Upon articles appearing, respectively, in the Lancet, January 3, 1874, pages 9 and 10, and the Druggists' Circular, June, 1875, page 108. From the Lancet I have this quotation:

"The wound once sweetened was enveloped in antiseptic gauze, and the next day dressed with boracic lint, which is prepared by dipping lint in a hot saturated solution of boracic acid and then taking it out and letting it dry."

The other quotation states that—

"Dr. J. Edmunds employed dressings of lint steeped in a hot saturated solution of boracic acid."

Complainant's counsel objects to the quotations contained in the witness' answer or alleged quotations because the publications to which the witness refers are not set up in defendant's answer and gives the same notice of motion as heretofore given.

Q. 12. Please state the object of the use of glycerine in the aforementioned borated cotton?

A. It is used to prevent dryness.

Q. 13. Has the use of glycerine in antiseptic dressings been known to chemistry prior to April 17, 1876?

Objected to as incompetent.

A. It has.

Q. 14. Please state some of the grounds upon which you base the above answer.

A. In the American Journal of Pharmacy for Nov., 1871, page 516, Professor Gubler in an article on glycerized cotton for dressing wounds states that—

"he found wadding prepared by saturating with a certain
65 quantity of glycerine to be rendered permeable to all medicinal liquids."

Complainant's counsel gives the same notice of motion as heretofore.

Q. 15. Is boracic acid soluble in glycerine?

A. It is.

Q. 16. Was solubility of boracic acid in glycerine generally known prior to April 17, 1876?

Objected to as incompetent.

A. It was.

Q. 17. Please state some of the grounds for the above answer?

A. In the American Journal of Pharmacy, 1867, page 150, it is stated that—

"100 parts of glycerine will dissolve 10 parts of boracic acid."

Objected to as incompetent.

Q. 18. On page 15 of the complainant's testimony the witness for the complainant for answer to Q. 22 as to the meaning of the word hygroscopic says: "For instance, take phosphoric anhydride, a white powder, this is so hygroscopic that when exposed to the air it becomes liquid in a short time from the absorption of moisture in the air." Has glycerine been known for a long time and prior to April 17, 1876, to be hygroscopic in the sense in which the word hygroscopic is used in the above-quoted answer?

Objected to as incompetent.

A. Glycerine has for many years prior to date of patent been known to be hygroscopic, hygroscopic meaning the property of absorbing moisture from the atmosphere. The liquefaction of a solid by virtue of moisture absorbed from the atmosphere is usually termed deliquescence; the property a liquid has of absorbing moisture from the atmosphere would be called hygroscopic; glycerine is hygroscopic.

Q. 19. Was glycerine known to the scientific world prior
66 to April 17, 1876, as an antiseptic and as a preservative of *of* animal and vegetable matter?

Objected to as incompetent.

A. It was.

Q. 20. Please state some of the grounds for the above answer?

A. In the American Journal of Pharmacy 1867, page 151, appears the statement:

"All organic substances soaked in glycerine are thoroughly preserved, both as to form, integrity, and softness"—on the same page glycerine dressings, it is stated, applied to suppurating surfaces change the abnormal condition by arresting the degenerating process through its antiseptic and other properties.

Q. 21. On page 32 of the complainant's testimony on the cross-examination of Mr. Am Ende, Q. 43, as follows, is asked him: "Is glycerine antiseptic or preservative" And the answer thereto is: "It is used as a preservative. I do not consider glycerine as one of the substances that should be properly classified among the antiseptics," and upon the same page the cross-examination of the same witness, Q. 44 as follows: "As a matter of fact don't you know glycerine has been so classified?" and the answer thereto: "I don't know." From your investigation and the quotations read by you, have you not found glycerine described as an antiseptic in publications bearing date prior to April 17, 1876?

Objected to as incompetent.

A. In the article quoted from above, the antiseptic properties of glycerine are spoken of.

Q. 22. On page 29 of the complainant's testimony, on the cross-examination of Mr. Am Ende, Q. 33, the question is asked: "Is it not, as a matter of fact the case, that the addition of glycerine to cotton has been known for a long period to render the cotton hygroscopic," and the answer thereto: "Glycerine alone could never render cotton hygroscopic;" and on page 30 of the cross-examination of the same witness, Q. 37: "Has it not been long
67 known that a combination of cotton, glycerine and boracic acid would render the cotton hygroscopic?" and the answer thereto, "No, sir. Not before the patent." Is the statement of Mr. Am Ende in the above-quoted answer, that glycerine alone could never render cotton hygroscopic, a correct statement?

Objected to as incompetent; no sufficient knowledge in the witness having been shown?

A. It is not.

Q. 23. Please state any investigation that you have made to show the correctness of your answer?

A. 100 grains of cotton were saturated with glycerine and expressed. The weight of this glycerized cotton at 9.20 a. m., October 20, was 240½ grains. At 9.50 a. m., the cotton having merely rested on the balance, the weight of this same glycerized cotton was 241½

grains; at 12.25 noon, same day, the weight of this cotton had increased to 246½ grains; at 5 p. m. the weight was 251½ grains; on the following day, at 8.20 a. m., the weight had increased to 258½ grains. By this gradual increase, due simply to the absorption of moisture from the atmosphere, this glycerized cotton had increased in weight 18 grains in 23 hours. This represents an increase of over 7 per cent. of the total weight, or 18 per cent. on the weight of the original cotton. This experiment proves that glycerized cotton has the property of absorbing moisture from the atmosphere, and that glycerine alone can and did render cotton hygroscopic.

Q. 24. The cotton is therefore in borated cotton, a vehicle for the glycerine and boracic acid, is it not?

A. It is, or rather the glycerized cotton is a vehicle for the boracic acid.

Q. 25. The boracic acid and the glycerine are found in this borated cotton of Seabury & Johnson's as glycerine and as boracic acid?

A. They are.

Q. 26. From a chemical standpoint, are not the terms, "antiseptic" and "preservative" identical?

Objected to as immaterial.

A. A "preservative" depends for its activity on its antiseptic properties.

68 Q. 27. Can you compare them?

A. I can.

Q. 28. Then, please do so.

A. Chemically, I regard the two words as identical, any difference being one of degree.

Direct examination of this witness closed.

S. W. WILLIAMS.

Adjourned until December 9th, at 11 a. m.

December 9th, at 11 a. m., met pursuant to adjournment, and adjourned to December 13th, at 2 p. m.

December, 2 p. m., 13th instant, met pursuant to adjournment.
Present: Counsel as before.

Cross-examination of defendants' witness, S. W. WILLIAMS.

By Mr. KNAUTH:

X Q. 1. How long have you been in the employ of the defendants?

A. Two years the coming January (1888).

X Q. 2. What are the duties of your occupation there?

A. Experimental and analytical work; manufacture of extracts; medication of antiseptic dressings, etc.

X Q. 3. How old are you?

A. 26 years.

X Q. 4. Have you had any practical experience in the manufacture of antiseptic dressings, prior to the time of your employment with the defendants?

A. I had not.

69 X Q. 5. Have you any experience in the practical application of antiseptic dressings?

A. I have not, if you mean surgical practice.

X Q. 6. Have you any experience in the application of antiseptic dressings to preserve flesh or meat?

A. I have not.

X Q. 7. When did you first commence the study of chemistry?

A. The autumn of '79. I may add aside from studying academic courses.

X Q. 8. How long before that time had you studied in academic courses?

A. I can't answer that question. I don't remember.

X Q. 9. Can't you give us an idea whether it was one or five years?

A. I should say between the two; the date can just as well go from '79.

X Q. 10. In what school or college did you study chemistry before that time?

A. Whatever study I had before that time was in the Leroy Academic Institute.

X Q. 11. How long did you study in that institute?

A. In regard to chemistry, I can't say; generally, several years; I can't say how many.

X Q. 12. When you testified here in your last examination, you stated that you found certain statements in books which you gave. Had you the books before you when you testified on your examination?

A. I had merely quotations from them.

X Q. 13. Have you those books here now?

A. I have not.

X Q. 14. Did you become acquainted with those books prior to 1879?

A. Not all of them.

X Q. 15. Which of those books that you have mentioned did you know prior to 1879?

A. I think I had seen the Druggist Circular some time before that.

X Q. 16. Do you know before that time when you saw the Druggist Circular?

70 A. I have a vague idea of having seen it before that time, but I can't say when.

Complainant's counsel repeats his objection as to the incompetency of the witness, and also objects to the alleged quotations made by him on his direct examination as not the best evidence.

X Q. 17. You state, in answer to question 12, that the object of the glycerine in the borated cotton of the defendants, is to prevent

dryness. Can you explain more in detail, how dryness is prevented by the use of glycerine in that article?

A. Glycerine being a hygroscopic liquid has the property of absorbing moisture from the atmosphere; the extent of this absorption is largely increased as the surface of the liquid is increased. When cotton is impregnated with a solution containing glycerine, upon the evaporation of the liquid used as a solvent the glycerine is left disseminated throughout the cotton upon the fibres—the surface of this hygroscopic liquid exposed to the air having thus been greatly increased the glycerine on the fibres of the cotton is therefore in a position to exercise its hygroscopic qualities very fully. In doing this, it attracts some moisture from the air and prevents dryness of the cotton—this dryness being prevented to a certain extent by the glycerine itself, it being a liquid.

X Q. 18. Is the glycerine, which, as you state, is contained in defendant's borated cotton, of which I now show you a sample, marked "Stack package No. 2," contained in it in liquid form?

A. To all appearances not in a liquid form, but being there in practically in its original condition, in a liquid state.

X Q. 19. Do you mean that it is practically in the same condition as to being liquid, in which it is before you applied to the solution of boracic acid used in the manufacture of this article, and only so finely divided that it does not flow?

A. Its present condition bears practically the same relation to its previous condition, as would water on the expressed fibres of
71 cotton previously moistened with a water solution of common salt, to the water in its original condition.

X Q. 20. The glycerine in the defendant's borated cotton has not evaporated, but is still present?

A. It is still present.

X Q. 21. Is the boracic acid contained in the defendant's cotton present as a powder or in crystals, or in liquid state?

A. That portion of it soluble in the amount of glycerine present is presumably there as a liquid, the remainder is finally deposited on the cotton fibres in a minutely crystalline deposit.

X Q. 22. Have you ever made any examination of the borated cotton manufactured by the defendants with a view of ascertaining if any boracic acid in crystal form is contained in it?

A. I think I have made a microscopic examination of the cotton, but, as a rule, trusted to the proper course producing the proper effects.

X Q. 23. Are you able to state the results of that microscopic examination?

A. Not definitely. I have but a poor recollection of it, anyway.

X Q. 24. When did you make it?

A. I don't know.

X Q. 25. Are you willing now to swear that the borated cotton of the defendants does contain any boracic acid in crystal form?

A. I feel positive that the borated cotton must contain a portion of the boracic acid deposited in a minutely crystalline state.

X Q. 26. Can you give us the relative proportions of the boracic

acid which is present in a liquid state and the boracic acid which is present in a crystalline form?

A. That portion soluble in glycerine and the slight amount of water absorbed from the air by the glycerine would naturally be there in a liquid state; the remainder deposited on the fibres.

Objected to as irresponsive and question repeated.

72 A. Basing my answer upon the solubility of boracic acid in glycerine, at ordinary temperatures, as stated by standard authorities, I should say that within the neighborhood of ten per cent. of boracic acid were present in a liquid state and the remainder in a minutely crystalline state.

X Q. 27. Can you explain by what process of reasoning you arrived at this conclusion?

A. Knowing the relative proportions of boracic acid and glycerine used and the solubility of boracic acid in glycerine at ordinary temperatures, I think I am able to give an approximately correct answer to the question.

X Q. 28. What are the relative proportions of boracic acid and glycerine use by the defendant?

A. About equal parts.

X Q. 29. Is the glycerine added after the boracic acid has been dissolved in hot water?

A. The cotton has been generally made that way, as hot water is a sufficient solvent for boracic acid—however, I can't say but what the boracic acid and glycerine have been added together sometimes.

X Q. 30. What proportion of boracic acid in an undissolved state can be dissolved in glycerine?

A. One part of boracic acid at ordinary temperature will dissolve in 10 parts of glycerine (in 10 parts of glycerine, according to standard authorities).

X Q. 31. Do the defendants use a saturated solution of boracic acid in hot water?

A. As temperature is raised for the simple purpose of dissolving boracic acid the liquid is doubtless at times not far from being a saturated solution.

X Q. 32. Is it usually a saturated solution or nearly so?

A. The temperature is kept sufficiently high to insure against the solution reaching the point of saturation immediately below which it would deposit crystals, and the liquid thus fail to act as a proper vehicle.

X Q. 33. Can you state the proportions of boracic acid, water and glycerine the defendants use on a certain amount of cotton?

A. 100 lbs. of water, 15 lbs. boracic acid and about 15 lbs. of glycerine are used in impregnating about 100 lbs. of cotton.

73 X Q. 34. You have stated that boracic acid and glycerine are both antiseptics in your opinion. Do you know whether any cotton containing only glycerine is used and sold in the market for similar purposes as the borated cotton of the defendants?

A. I think not.

X Q. 35. What is the relative price of glycerine and boracic acid?

A. I don't know the price of boracic acid—glycerine is about twenty-five cents a pound.

X Q. 36. Did the defendants while you were in their employ ever manufacture any borated cotton without the use of glycerine?

A. Not to my knowledge.

X Q. 37. In answer to question 23 you state that you saturated 100 grains of cotton with glycerine and made a certain experiment with it; was that cotton which you used for that purpose raw cotton, or had it been previously prepared?

A. It was regular absorbent cotton.

X Q. 38. What is regular absorbent cotton?

A. Absorbent cotton is cotton deprived of its natural oil; bleached, washed and dried.

X Q. 39. How is it deprived of its natural oil?

A. By subjection to the action of hot alkaline solution. The alkali saponifying, the oil, thus producing a soap, soluble in the liquid present.

X Q. 40. Is the alkali you speak of soda?

A. The alkali used is soda ash.

X Q. 41. Is the term "absorbent cotton" identical with the term hygroscopic cotton?

A. It is not——

X Q. 42. Please explain the different meanings.

A. Absorbent cotton having been freed from its oil readily takes up water when either dropped into it, or when any portion of it is brought in contact with water in a liquid state; hygroscopic cotton is cotton which will absorb moisture from the atmosphere.

Cross-examination closed.

Adjourned till Thursday, at 2 o'clock.

S. W. WILLIAMS.

74 DECEMBER 15, 1887.

Met pursuant to adjournment.

Present: Counsel as before.

Redirect examination by defendant's counsel:

Q. 42. On the examination you — ask- whether you had the book from which you had made quotation in regard to glycerized cotton, and the use of glycerine as an antiseptic and as a preservative, and the use of boracic acid. Have you those books present?

A. I have all but one.

Q. 43. Please state from what custody you got those books?

A. From the editor of the Druggists' Circular, 72 William street.

Q. 44. Please state whether you have not from time to time had occasion to examine books from the same custody, and whether you have ever found any material misrepresentation with regard to the date or the imprint of the publication?

Objected as incompetent, immaterial and irrelevant.

A. I have examined books and journals in the editorial rooms of the Druggists' Circular before and found them correct with respect to the date and publication.

Q. 45. Please turn to the several quotations which you have made heretofore and give them, together with their date of publication or imprint, and pages.

A. Druggists' Circular, June, 1875, page 108, last paragraph, under the heading "Boracic Acid:" The reference to glycerized cotton for dressing wounds, American Journal of Pharmacy, Nov., 1871, page 516, 2d paragraph on the page. The solubility of boracic acid and glycerine, American Journal of Pharmacy for March, 1867, pages 149 and 150, under heading "Glycerine." With regard to the antiseptic properties of glycerine, same article, near
75 the top of the 152d page. With regard to the preservative properties of glycerine, the same article, near the middle of the 151st page.

Answer objected to as incompetent, the publications referred to by the witness not having been set up by their answer.

Q. You omitted one of the references to quotations given in direct examination. Please state why?

A. Because the reference in the Druggists' Circular covers the same ground.

Q. Do you know the general character and reputation of the publication from which you have quoted. If so, please state?

Objected to as immaterial.

A. They are two of the oldest, if not the oldest pharmaceutal journals published in the U. S., and are regarded by pharmacists and physicians as standing as authorities upon the subjects treated as high as any of their contemporaries.

Q. With the books referred to before you, do you reiterate the quotations made by you then on the references to which you have given above?

Plaintiff's counsel reiterates his objections already made to this witness, and to the quotations in particular.

A. Yes, I do.

Defendants' counsel now offers in evidence page 108 of Druggists' Circular and Chemical Gazette, third paragraph, under the head of "Boracic Acid," and the same is marked Defendants' Exhibit A; and also page 516 of the American Journal of Pharmacy, paragraph headed "Glycerized cotton" for dressing wounds, and marked Defendant's Exhibit B; and also page 149 and following pages of American Journal of Pharmacy for March, 1867, article headed "Glycerine" and the same is marked Defendant's Exhibit C.

Complainant's counsel objects to the exhibits offered, because they have not been set up in the answer.

76 Q. Please state in what parts boracic acid is soluble in glycerine.

A. One part of boracic acid is soluble in ten parts glycerine.

Q. Upon what, aside from your personal knowledge, do you base this statement?

A. From the statement that 100 parts of glycerine dissolves 10 parts of boracic acid, appearing in the American Journal of Pharmacy, in the article on glycerine, marked Defendant's Exhibit C; also from same statement as made by United States Dispensatory, last edition.

Q. Is it not generally known and accepted in chemistry?

A. As far as I know it is generally known and accepted as correct.

Q. State, then, whether or not a large portion of boracic acid must not be deposited as crystals when the glycerine and boracic acid are combined in equal parts.

Objected to as incompetent.

A. Equal parts of glycerine and boracic acid, when left upon cotton fibres by the evaporation of water which previously held them in solution, will exist in the cotton, or on the cotton, as boracic acid and glycerine, in the neighborhood of about 10 per cent. of the acid being retained in solution by the glycerine. This percentage of dissolved boracic acid is based on the authorities just referred to. The rest of the acid, I think, must of necessity be deposited on the cotton fibre as minute crystals, with the exception of the amount held in solution by the water retained in or attracted to the cotton by virtue of the hygroscopic properties of glycerine.

Q. Please state whether at ordinary temperatures under which Seabury & Johnson's borated cotton is prepared, the glycerine and boracic acid form any new combination or substance, or whether they appear simply as glycerine and boracic acid.

A. They appear simply as glycerine and boracic acid.

Q. In the quotation marked Defendant's Exhibit B it is said that Professor Gubler found that by saturating wadding with
77 glycerine it was rendered permeable to all medicinal liquids. Is boracic acid a medicinal liquid?

Objected to as incompetent.

A. It is not, the anhydrous acid being understood.

Q. Is a solution of boracic acid a medicinal liquid?

Same objection.

A. It is.

Examination closed.

S. W. WILLIAMS.

Adjourned to Saturday, 24th of Dec., 1887, at 11 a. m.

Defendant's time to take proofs is hereby further extended until and including January 12, 1888.

ANTONIO KNAUTH,
Of Counsel for Complainant.

Circuit Court of the United States, Southern District of New York.

CHARLES G. AM ENDE
vs.
SEABURY & JOHNSON. } In Equity.

Motion having been made by defendant for leave to take further testimony in surrebuttal and the affidavits of Justus Wolff, William Rupp, S. W. Williams and W. D. Davis having been read
78 and filed, and N. T. M. Melliss, Esq., having been heard in support of the motion, A. v. Briesen in opposition—

Now, in consideration thereof

It is ordered, that the said motion is granted, and that the defendant have to, and including Monday, April 9, 1888, wherein to introduce proofs, strictly in respect to the question as to whether glycerine and boracic acid combine chemically to form a new substance in the borated cotton in this litigation.

The case to retain its place on the calendar for final hearing.

W. J. WALLACE, *J.*

Circuit Court of the United States, for the Southern District of New York.

CHARLES G. AM ENDE, Complainant,
against
SEABURY & JOHNSON, Defendants. } In Equity.

Please take notice that we shall proceed to take further proofs for final hearing on the part of the defendants in surrebuttal pursuant to the terms of the order made herein by Mr. Justice Wallace, this day, under the 67th rule of the Supreme Court for courts of equity, as amended, and in accordance with the statutes in such cases made and provided and in pursuance of the rules and practice of this court, before John A. Shields, a standing examiner for this court, under said statutes and rules, at my office, 66 Liberty street, New York city, on the 7th day of April, 1888, at one o'clock in the afternoon.

That such evidence to be adduced will be taken orally.

79 You are invited to attend and cross-examine the witnesses produced. The examination will be adjourned to such time and place as may be required without further notice.

Dated New York city, April 6, 1888.

Very respectfully,

JOHN L. LOGAN,
Defendant's Solicitor.

To Briesen & Steele, complainant's solicitors.

United States Circuit Court, Southern District of New York.

CHARLES G. AM ENDE
vs.
SEABURY & JOHNSON.

Testimony taken before John A. Shields, standing examiner of the court, under and pursuant to order of this court, made and filed April 6, 1888, and pursuant to notice hereto annexed.

NEW YORK, *April* 7, 1888—1 o'clock p. m.

Present: A. v. Briesen, Esq., of counsel for complainant, and N. T. M. Melliss, Esq., on behalf of defendant.

JUSTUS WOLFF, Esq., called and sworn as a witness on the part of the defendant, deposes and says as follows:

Counsel for the defendant asks for an adjournment of this examination to April 9, 1888, at 11 oclock a. m.

80 Counsel for complainant states that he is ready to proceed to-day; that two witnesses have been sworn, and are present, and that he does not therefore see why an adjournment should be taken, but that he does not object to the same if the defendant insists.

Examination adjourned to April 9, 1888, at 11 o'clock a. m.

NEW YORK, *April* 9, 1888—11 a. m.

Present: Counsel as before.

JUSTUS WOLFF, a witness, testifies:

Direct examination by —— ——:

Q. 1. Where do you reside, your age and profession?

A. I reside in Lewis street, Union Hill, in New Jersey, and I am 51 years of age. My profession is an analytic and manufacturing chemist, in Jersey City, corner of Fourteenth and Coles streets.

Q. 2. Have you directed your attention to any particular branch of chemicals in manufacturing; if so, state what branch you have directed your attention to?

A. My special attention has been paid to antiseptics obtained from different substances and to preservatives.

Q. 3. Please state where you studied chemistry and where you graduated.

A. I studied chemistry first with Professor Wittstein at Anspach, Bavaria. Then subsequently at the Polytechnicum in Nuremberg for two years, from which I graduated. Subsequently I became an eleve in the laboratory of Professor Fresenius in Wiesbaden for two years. I am graduated from it.

Q. 4. Since that time how have you been occupied in a general way?

A. I have been occupied as manager of chemical works and was

an analytical chemist in Germany, Switzerland, France,
81 England and this country, in which latter I served for six months as chemical expert for the Government of the United States among other occupations.

Q. 5. Have you experimented with boracic acid and glycerine?

A. I have, in order to ascertain their antiseptic and preserving properties.

Q. 6. Do you know what boro-glycerine is; if so, state what it is?

Objected to as outside of the order in which this examination is taken.

A. Boro-glycerine is a chemical compound formed by heating glycerine and boracic acid and consists of the residue of glycerine in which the three hydroxyl-hydrogenes acids substituted by one triatomic borine.

Q. 7. How long has it been known to chemists?

Same objection.

A. This compound has been known to chemists since the year 1866, when Schiff & Bechi published its preparation and constitution.

Q. 8. Is boro-glycerine, in your opinion, a chemical compound?

Same objection.

A. It is a chemical compound of a constitution which I described before in my answer.

Q. 9. Have you read the letters patent in suit No. 181,024, of which I now hand you a copy, and if you have, do you understand the same?

Objected to on the ground already stated, the order limiting the inquiry to the matter contained in the cotton itself which is involved in this litigation, the construction of the patent being particularly omitted from the order.

A. I have read it, and I understand it.

Q. 10. Have you read the testimony of Mr. Charles E. P. Meumann, a witness called on the part of the complainant in this case, which I now show you a copy?

Same objection.

82 A. I have read it.

Q. 11. I will call your attention on page 29, question 24 of Mr. Meumann's testimony as printed in this case, and the answer thereto, and ask you whether the date of the discovery of boro-glycerine as stated in that answer is correct or not?

Same objection.

Question withdrawn.

Q. 12. Mr. Meumann in his testimony in question 31, which I

now read to you (reading): In your opinion, is that statement correct?

Same objection.

A. It is not correct, as no boro-glycerine can be formed at the low temperature to which the cotton is exposed in the drying-room or chamber.

Q. 13. Mr. Meumann in his cross-examination on page 38 of complainant's testimony, states in answer to X Q. 52, what evidences can you give that there is such a chemical combination of glycerine and boracic acid, states the evidence is a microscope (question and answer read to the witness). Have you had any experience with this cotton with the microscope, if you have, state the result of it.

Same objection,

A. I have, and I found it to contain free boracic acid in a loose state, besides the glycerine.

Q. 14. In what quantity were the proportions of boracic acid?

Same objection.

A. I have not determined the quantity exactly, by weight, but I found it in a large proportion.

Q. 15. Would the absence of crystals in the cotton under the microscope be evidence of chemical combination of glycerine and boracic acid in the cotton?

Same objection.

A. It would not be evidence of the combination of these compounds.

83 Q. 16. In what proportions are glycerine and boracic acid combined?

Same objection, and already fully testified to by Mr. Williams.

A. In the proportions of the molecular weights, 62 of boracic acid to 92 of glycerine.

Counsel for complainant now withdraws his objection to the last question, because the answer shows that Mr. Williams' answer to question 17 was erroneous.

Q. 17. I will read you X Q. 54, page 38, of Mr. Meumann's testimony. (Reading.) Are these the proportions at which boracic acid and glycerine will combine chemically?

Same objection.

A. These are not the right proportions, and in the end of the reaction an excess of boric acid will be found.

Q. 18. I will read you question of Mr. Williams' answer to question 17 in his direct examination. (Reading.) In which he states, quoting from the American Journal of Pharmacy, page 150, that "100 parts of glycerine will dissolve 10 parts of boracic acid." Is there anything contradictory in that statement to your answer to

question 16 of your examination. (Question 16 and answer thereto read to the witness.)

Same objection as most grossly outside of the order. Defendants' counsel only asks this in view of the statement put on record and do not claim that this is in the order; question withdrawn.

Q. 19. Where did you get the borated cotton which you have testified you examined under the microscope?

A. I bought it at Ditman's pharmacy, at 10 Astor house, this morning.

Q. 20. Have you got the package with you?

A. (Witness produces package.)

Q. 21. It has been in your possession since you bought it?

84 A. Since I bought it it has never left my hands. It is in the same condition since I bought it, except that I took out a sample.

Offered in evidence and marked Defendant's Exhibit April 11, 1888, J. A. S., ex'r.

Cross-examination by Mr. BRIESEN:

X Q. 22. Why didn't you get the sample from Seabury & Johnson?

A. Because it would not have been fair. I thought I had better have the sample which had been through commerce.

X Q. 23. Is that the first sample of the manufacture which you have examined microscopically?

A. It is not the first sample. I had a sample which had been bought by some one else in the same condition, which I examined before.

X Q. 24. Have you observed the manner in which the defendants manufactured their borated cotton?

Objected to on the ground that it is not within the scope of cross-examination and as immaterial.

A. I have not observed the manufacture of the borated cotton by the defendants.

X Q. 25. How many degrees of heat do you suppose are employed by defendant and how many degrees by complainant for drying borated cotton involved in controversy?

Objected to on the ground that the witness' previous answer shows that it is not within his knowledge, and his supposition as to a fact is incompetent evidence and as immaterial.

Counsel for complainant excepts to the objection as well founded and will read it to the court in connection with his testimony as given in his answer to question No. 12, and in view of the objection he withdraws his question.

X Q. 26. What is the object or use of the glycerine in borated cotton?

85 A. There are several objects; the first is to make the boracic acid crystals stick to the fibre; the second object is to dissolve the boracic acid partially and keep it in solution, and the third object is to render the cotton more pliable and absorbent.

X Q. 27. What is the object of water in that borated cotton?

A. The water is not really an object in the borated cotton.

Counsel for complainant objects to this part of the answer as immaterial and not responsive.

Witness continues: But it is used in the first instance for dissolving the boracic acid to which solution glycerine is added; by drying the cotton subsequently, of course, some of the water remains unintentionally with the fibre and the compounds.

X Q. 28. Is there no water in the package which you have produced to-day?

A. There is water in——

X Q. 29. Is not the glycerine used in that cotton because of its hygroscopic properties?

A. Certainly, it is used on this ground.

X Q. 30. Then, if the glycerine is used on account of its hygroscopic properties, how do you come here to swear that the water in the cotton is "unintentionally" there?

Defendants' counsel objects to the foregoing question, upon the ground that it does not refer and is not embraced in the scope of this supplementary testimony as taken in the direct.

Counsel for the complainant desires the officer to note that the gentleman who made the last objection is Mr. Davis, who has not read the direct testimony of this witness, but that he just came in to take Mr. Melliss' place.

Defendants' counsel, Mr. Davis, desires it noted that the above objection was made with a full knowledge of the order of this court in regard to the scope of this investigation, and after conference with defendants' chemical expert (Mr. Williams), who was present during the taking of the aforesaid testimony.

86 A. Well, what I meant to say was, that the water is not directly intended to be in contact with the fibre, but is brought in contact with it by means of the hygroscopic qualities of glycerine.

X Q. 31. How long have you been in this country?

A. Since the beginning of 1882.

X Q. 32. You have testified that you have been a chemical expert for the United States of America?

A. Yes; chemical expert for the United States of America.

X Q. 33. Through whom did the United States of America ensure your services as such, and when and where?

A. Through Mr. Elihu Root, the late district attorney for New York. I think in March or February, 1884, in New York city.

X Q. 34. And for what purpose?

A. For the purpose of giving evidence in some cases of a complicated chemical nature.

X Q. 35. After having tried you for six months, as you have stated, the United States of America have refrained from employing you as expert chemist?

A. Yes, yes; of course the cases were won, and it was for this special purpose I was employed in the custom-house or public stores.

X Q. 36. You mean after having served as such expert you were put in the public store?

A. No, before.

X Q. 37. Do you understand Mr. Meumann to testify, without reservation, that the glycerine and the boracic acid used in the preparation of borated cotton combined chemically to form a new chemical compound? If so, please point out those answers in his deposition, which, to your mind, convey such a meaning.

A. In answer to question 31.

X Q. 38. Does not that answer contain the words, "if not the same," and is it therefore without qualification?

A. Well, I understood it, understand it now, "if not" and then a comma, "the same" substance can be got at by mixing equal parts of glycerine and boracic acid, and exposing it in thin
87 layers to moderately warm air. I cannot find the sense of the other construction. In answer to X question 46, I think if Mr. Meumann speaks of a similar compound it to be a chemical combination as a single solution would not be a similar compound.

X Q. 39. You take it that a solution is not a chemical compound. Do I understand you correctly in that respect?

A. Yes; it is not a chemical compound.

X Q. 40. Are you acquainted with Storer's Dictionary of Chemical Solubilities?

A. No.

X Q. 41. I remember reading Prof. Storer's (he's from Harvard) introduction to that valuable work, and I now give notice that I shall read it in part at the trial of this suit; and he holds, if I remember right, that the question as to whether a solution is, or is not, a compound is far from being settled, giving several examples for his opinion. Am I to understand you, Doctor, to hold, that no solution can be a compound?

A. Oh, no. There are some solutions in which the combination may take place by dissolving, but in general under the term solution is meant a molecular division of the compound or body to be dissolved amongst the molecules in the solvent.

X Q. 42. After you have dissolved a solution of boracic acid in glycerine, how would you go to work to separate that solution from the glycerine?

Defendants' counsel objects to the above question on the ground that it is irrelevant to the scope of the investigation, as drawn out on the direct examination.

A. By evaporation I would get rid of the greatest part of the water which had served as solvent for the boracic acid, whereby the latter will crystallize out and can be separated.

X Q. 43. Glycerine without the water will, in your opinion, not hold the boracic acid in solution; am I right?

Same objection.

A. No; boracic acid dissolves in ten parts of glycerine.

X Q. 44. Then your answer to cross-question 42 is not
88 meant to imply that all the boracic acid crystallizes out of the glycerine?

A. No.

X Q. 45. But my question 42 was intended to ask you how you would go to work to so separate the parts as to give me all the glycerine there was in the mixture free from boracic acid?

Same objection.

A. I do not know of any way, but by neutralizing the boracic acid with caustic soda and the distilling of the glycerine by superheated steam, where borax will remain which is decomposed by an addition of hydrochloric acid and thereby the boracic acid is obtained in crystals.

X Q. 46. Borax is not the same as boracic acid?

A. No; borax is combination of boracic acid with a sodium, which is a metallic base.

X Q. 47. Please look at the article entitled, "Surgical Dressings" in the Medical Circular of January 1, 1884, page 3, and state whether it correctly describes the borated cotton of complainant's patent, which has been shown you?

Objected to as incompetent, immaterial, on the further ground the article speaks for itself and has not been offered in evidence by complainant in this taking of his testimony on the further ground that the patent speaks for itself.

A. There is no quantity of glycerine and boracic acid in the proportions given in the patent, so that I am unable to judge if there is sufficient glycerine used to all the proportions of boracic acid in solution completely. In the articles submitted it is stated that the boracic acid is contained in solution with the fibre.

Said article is now offered by counsel for complainant and is marked Medical Circular, April 9, 1888, J. A. S., ex'r.

Defendant's counsel objects to the above article on the ground that the source of its publication has not been authenticated
89 nor any basis laid for its reception in evidence as a chemical journal, and on the further ground that it is incompetent at this stage of the investigation.

X Q. 48. What difference, if any, do you find to exist between boro-glycerine dissolved in water and boracic acid in solution dissolved in glycerine?

Objected to by defendant's counsel on the ground that it is immaterial and irrelevant and not within the scope of the order.

A. Boro-glycerine does not dissolve in water without restoring the glycerine and boracic acid to their free uncombined state.

X Q. 49. Is boro-glycerine hygroscopic?

A. Very much hygroscopic.

X Q. 50. Does it not then dissolve in water?

A. Not as boro-glycerine.

Answer objected to as evasive.

X Q. 51. When it dissolves it becomes glycerine and boracic acid, is that it?

A. Yes, sir.

X Q. 52. Is there anything stated on the package which you produced to-day to show that glycerine is used in that package?

Objected to on the ground that *is* what is on the package is the best evidence of what that states; that the question calls for the conclusion of the witness as to what it states, and on the ground that the package is already in evidence, and objected to on the further ground that it is incompetent, irrelevant and immaterial as to what was in this package, and not within the scope of the order under which this testimony is taken.

A. There is no indication that glycerine is contained in the cotton.

X Q. 53. Do you know the color of the flame produced by
90 burning cotton that only contains boracic acid and the color of the flame from the cotton that contains boracic acid in solution in glycerine?

Same objection.

A. I do not know of any difference. I only tried some of this package which burned with a bright green flame.

JUSTUS WOLFF.

WILLIAM RUFF, a witness called on behalf of the defendant, having been duly sworn, testified as follows:

Direct:

I reside at Fort Lee, New Jersey. I am an analytical and consulting chemist. I am 34 years of age, and have an office at 117 Pearl street, New York. I studied chemistry at the School of Mines at Columbia college, New York, for 8 years; 4 years as student and 4 years as assistant. I was assistant for 3 years to Prof. Monroe and one year to Prof. Chandler in his private laboratory. I studied at the Royal Mining School at Freiberg, at Saxony, for four terms, 20 months; then after that I was employed as a chemist in manufacturing business, and for the past 7 years I have been in business as consulting chemist.

Q. 1. In your opinion, as chemist, can any new chemical compound similar to boro-glycerine be formed by using boracic acid and glycerine in the manufacture of borated cotton?

A. It cannot.

Q. 2. State your reasons for that opinion.

A. In the reaction which takes place when boracic acid acts upon

glycerine the temperature of at least 140 to 150 degrees centigrade is required to eliminate the three molecules of water formed by the combination of the three molecules of hydroxyl contained in the glycerine with the three atoms of hydrogen of the boracic acid. My experience in preparing boro-glycerine has been that the water cannot be completely expelled at a lower temperature than that above stated. Now in the borated cotton manufactured by Seabury
91 & Johnson, I do not believe that the chemical combination has taken place, because I have been able by examination with a microscope to detect the presence of crystalline boracic acid. The further reason why a new compound cannot be formed is, that if the cotton were subjected to the temperature required for forming boro-glycerine, it would be destroyed.

Cross-examination by Mr. BRIESEN:

X Q. 3. Did you ever try to ascertain how many degrees of temperature cotton may be exposed to without burning it?

A. Yes, sir; cotton when heated to as low as 120 degrees continually for a number of hours, would carbonize.

X Q. 4. That would make it a very poor non-conductor of heat applied to heated surfaces, would it not?

A. Yes, sir.

X Q. 5. And of course, you know that it is not so used as a non-conductor?

A. Cotton is not used as a non-conductor to my knowledge.

X Q. 6. You don't know of the use of cotton wadding on steamboat engines for non-conducting purposes?

A. I do not.

X Q. 7. And you are ready here to swear that cotton will be substantially destroyed at a temperature of 120 degrees centigrade?

A. Yes, sir.

X Q. 8. That is 20 degrees above the boiling point of water?

A. Yes, sir.

X Q. 9. How does boro-glycerine look under the microscope?

A. I have never examined it under the microscope, but from its general properties would suppose that it had the appearance of ordinary glass.

All after the word "microscope" is objected to as not responsive to the question.

X Q. 10. How does it look to the naked eye?

92 A. Like a transparent glassy mass.

X Q. 11. In bulk and in small pieces?

A. In what I call small pieces.

X Q. 12. How does boracic acid look?

A. Boracic acid is a white crystalline mass.

X Q. 13. How does it differ in appearance from boro-glycerine?

A. The boracic acid shows the crystalline structure. It shows the hexagonal plates or six-sided form.

X Q. 14. And this comparison you are prepared to make without having examined the boro-glycerine microscopically?

A. I don't believe I made any comparison. I simply stated what the appearance of boracic acid is.

X Q. 15. Cross-question 13 repeated?

A. I can't say what the boro-glycerine looks like. I can only say what the boracic acid looks like under a miscroscope.

X Q. 16. When did you prepare boro-glycerine?

A. I first prepared boro-glycerine shortly after the announcement of the invention of boro-glycerine by Prof. Barff. I think it was in 1883 or 1884; I am not positive about the date.

X Q. 17. Was it not in 1866?

A. Oh, no; I think it was in 1883 or 1884 when Prof. Barff announced his discovery—when he patented it.

Defendant's counsel objects to question 17 on the ground that it is indefinite.

Witness continues: I don't understand exactly what you refer to. I do not know whether the question refers to the time when I first prepared the boro glycerine or the time when the discovery of boro-glycerine was announced by Barff.

X Q. 18. When was it announced by Barff?

A. I think it was in 1883 or 1884. I am not certain of the date.

X Q. 19. Where and how was it announced by him?

A. The statement was published in most chemical and pharmaceutical journals that he had discovered a new compound
93 which was to be used as a preservative, but it was afterwards found that the compound had been known for many years before Barff took out his patents.

All after the word "preservative" objected to as volunteered and not responsive to the question.

X Q. 20. And did those announcements state the degrees of temperature of which the compound was to be produced?

A. I believe they did.

X Q. 21. Did you ever try to produce boro-glycerine by exposing the constituents for a considerable length of time to a gradually increasing temperature below the boiling point of water?

A. I did not, for the simple reason that boro-glycerine cannot exist in the presence of water.

All after the first three words, objected to as not responsive.

X Q. 22. And do you mean to imply by the last previous answer that you cannot get rid of the water unless you expose that which contains it to the boiling point?

A. Glycerine cannot be freed from water at the boiling point of water.

Answer objected to as not responsive and as evasive.

X Q. 23. Without having had an opportunity of testing, you are, nevertheless, prepared to swear that you know that boro-glycerine

cannot be produced by exposing its constituents to a gradually increasing heat below the boiling point of water. Is that your testimony as an expert in this cause?

A. Yes, sir.

X Q. 24. And all the testimony you have given here is as true as the last answer; is that it?

Objected to as immaterial and irrelevant.

A. My answer in the previous question I base upon my knowledge of the subject, and I think——

Question is here re-read at the request of defendants' counsel, and he answers, Yes.

94 X Q. 25. How do you spell the name of that Mr. Barff which you have been talking about?

A. I think it is B-a-r-ff.

X Q. 26. Is it not B-a-u-j-a-r-f?

A. I think not.

Counsel for complainant gives notice that at the hearing he will produce the indexes and records from the Patent Office, showing all the issues of patents alphabetically arranged for the years 1883 and 1884, so that the court may be in position to observe what patent of Mr. Barff this witness refers to.

Counsel for the defense requests that counsel for complainant include the years 1880 and 1881.

Counsel for complainant replies that he will do so.

X Q. 27. Where were you when you first heard of this invention of Mr. Barff?

A. I was in the city here.

X Q. 28. Employed at what?

A. In the business of analytical and consulting chemist.

X Q. 29. Where was your office at that time?

A. At 117 Pearl street.

X Q. 30. You have testified that it afterwards appeared that Mr. Barff's invention was not new with him. State fully what was ascertained in that connection?

A. In the Journal Feurpraktische Chemie, vol. 98, page 182, in an article entitled Ueber die Borsauer Ether Schiff & Bechi, — describe a compound having a formula $C_3 H_5 BO_3$, obtained by the action of borax upon glycerine, and which is the same compound as that obtained by the action of boracic acid upon glycerine.

Answer objected to as not responsive.

X Q. 31. Did that German article state the degrees of heat?

A. I don't remember whether that stated a definite temperature or not.

X Q. 32. You appear to have read the title from off the book—from a memorandum. When did you make that memorandum?

95 A. I made that memorandum last Saturday, April 7, 1888.

X Q. 33. Did you look at the article on that day?

A. Yes, sir.

X Q. 34. And are you either unwilling or unable to state the temperature mentioned in that article?

A. I am unable to state.

X Q. 35. Your memory is not long enough, is it?

Objected to on the ground that the question has already been answered.

A. I am willing to give an answer; I was sick.

X Q. 36. Is boro-glycerine, "the residue of glycerine, in which the three hydroxyl-hydrogenes acids substituted by one triatomic borine?"

A. I don't understand that question. I don't know what hydroxyl-hydrogenes acids are. There is no such thing.

X Q. 37. I can't blame you. I don't understand that definition either. Will you please look at the answer to question 6 of your learned predecessor, Dr. Wolff, and see whether you agree with his definition?

A. From the appearance of this, I should say that Dr. Wolff got this probably from his lack of knowledge of English terms. I should say that the three hydroxyl groups are replaced.

Defendants' counsel objects to the above question on the ground that the witness is not offered as an expert on the English language, and that defendants' counsel will move to strike out the last question.

X Q. 38. Can you name a new chemical compound which is similar to boro-glycerine?

A. Only so far as they are derivatives of boro-glycerine.

X Q. 39. Do you know any compound which is new, and is also similar to boro-glycerine, and which is produced from boracic acid and glycerine?

A. No, sir.

WM. RUPP.

96 DEFENDANT'S EXHIBIT A.

The Druggists' Circular and Chemical Gazette, June, 1875, *Page* 108.

Boracic acid.

At a recent meeting of the chemical society Mr. Howard said boracic acid destroyed vegetable growth—grass, for instance—with a vigor and permanence which, if it were a fertilizer, would render it invaluable.

Mr. A. Smee, Jr., had found that if one part of a 10 per cent. solution of boracic acid were added to eight of milk it would keep it sweet for a week.

Dr. J. Edmunds, in a complicated case of amputation of the

thigh, had employed dressing of lint steeped in a hot saturated solution of boracic acid with most satisfactory results in preventing putrefactive discharge. The bandage could remain for thirty-six or forty-eight hours without the slightest putrefactive odor.

DEFENDANT'S EXHIBIT B.

American Journal of Pharmacy, November, 1871, *Page* 516.

Glycerized cotton for dressing wounds.

Professor Gubler, at a recent meeting of the Academie de Medicine, exhibited some specimens of wadding prepared by saturating it with a certain quantity of glycerine, which he had found to render it permeable to all medicinal liquids, without causing it to lose any of its suppleness and lightness. He suggested that in this state it might prove a useful substitute for charpie, in the event of a scarcity of that article. Dr. Delaborde has already employed it to advantage. In order to prepare this dressing, it is only necessary to pour a small quantity of glycerine over the square sheet of wadding, and afterwards express it as strongly as possible.

Pharm. Journ. and Tran., Sept. 30, 1871, from Journ. de Pharmacie et de Chimie.

97 DEFENDANT'S EXHIBIT C.

American Journal of Pharmacy, March, 1867, *Page* 149, &c.

Glycerine.

By Joseph Adolphus, M. D., of Hastings, Michigan.

In writing this article, I am aware that but a few are ready to receive the facts herein stated, inasmuch as glycerine has merely been regarded as a matter of but secondary import. It must not be considered out of place when I observe that glycerine stands next to cod oil as a restorative agent, especially in the cases of children's complaints. What cod oil is to the adult, glycerine is to children; at least in a great measure. The clinical facts below recorded are from my own practice. I am altogether strongly inclined to the restorative doctrine, because I have reaped the richest harvest of curative success for practicing it. Furthermore, I am not a firm believer in the doctrine, that the blood is the chief and only source of nutrition, repair, and reconstruction. However, I shall not digress further from my subject, but shall at some future period disclose my views on the latter subject.

Though glycerine has been before the profession for many years, I am not aware that that attention has been paid to this important remedial agent that its merits deserve.

Its excipient properties excel all other known solvents, because of its universality. Thus 100 parts of glycerine will dissolve * * acidum boracic. . . . 10.0 * * *

All the deliquescent salts and vegetable acids are soluble in it to a great extent.

Chemically, glycerine is a compound of a radical known as glyceryl, having a formula of $C_6 H_7$, in union with 5 eqs. of O, and one of water; its formula is, therefore, $C_6 H_7 O_5 + HO$.

When pure, its specific gravity is 1.26, and contains 98 per cent. of anhydrous glycerine. When exposed to the air, it absorbs one-half its weight in water. It never absorbs oxygen, hence it never becomes rancid, when originally pure. It is not soluble in fatty acids.

98 When perfectly pure, glycerine is of a thick syrupy consistence, very nearly colorless, and without odor, and of a sharp sweet taste. Alone, it is not susceptible of fermentation. It is soluble in all proportions in water and alcohol, but not in ether or chloroform. Pure glycerine evinces no reaction with litmus or other test-agents.

It is perfectly neutral and bland, and has the capacity of diffusing itself freely over and through organic matter, incorporating itself between organic molecules, by which it is absorbed and appropriated. All organic substances, from the hardest bone to the finest connective tissue, are penetrated by it, with such diffusive force as to make their minute structure astonishingly transparent. The blood and pus globules, when suspended in glycerine, become quite transparent, and show up their nuclei readily, their cell walls becoming more thin and transparent, and finally dissolved. Epithelial structure is admirably delineated by its agency; so are the fasciculi of striped muscular fibre. Thin sections of bone, soaked in it, reveal in admirable style its corpuscles. All organic substances, soaked in glycerine, are thoroughly preserved, both as to form, integrity, and softness.

* * * Burnt and blistered surfaces often produced false membranes, which induce severe constitutional symptoms, in consequence of the irritibility of the surfaces. Glycerine and morphia speedily remedy them, soothing the nervous irritation, and modifying the vital condition of the parts. Applied to suppurating surfaces which are painful and produce an ichorous pus, glycerine dressings change the abnormal condition by arresting the degenerating process, through its antiseptic and astringent properties. Applied to enlarged glands, and injected into abscesses, it meets every indication, either alone or with iodine, &c., dissolved in it.

99 At a stated term of the circuit court of the United States of America for the southern district of New York, in the second circuit, held at the United States court-rooms, in the city of New York, on Tuesday, the 23rd day of October, in the year of our Lord one thousand eight hundred and eighty-eight.

Present: The Honorable Alfred C. Coxe, judge.

CHARLES G. AM ENDE
vs.
SEABURY AND JOHNSON. } Final Hearing.

The above-entitled cause coming on for final hearing upon the pleadings and proofs—

Mr. Arthur v. Briesen is heard in behalf of the complainant.

Mr. Norman T. M. Melliss is heard in behalf of the defendants.

C. A. V.

100 United States Circuit Court, Southern District of New York.

CHARLES G. AM ENDE
vs.
SEABURY AND JOHNSON.

Arthus v. Briesen, for the complainant; Norman T. M. Melliss, for the defendants.

COXE, *J.*:

The complainant is the owner of letters patent No. 181,024, granted to him August 15, 1876, for an improvement in borated cotton. The object of the inventor was to produce a simple and inexpensive antiseptic dressing by combining the various advantages of cotton fiber with those possessed by boracic acid and glycerine. The specification asserts that prior to the invention boracic acid had been used as a preservative agent only in a fluid state or as a powder, and that it was necessary to immerse the matter to be preserved in the fluid or cover it completely with the powder,
101 requiring in either case large quantities of the acid. The inventor accomplishes a better and more permanent result in a much simpler and more convenient way by saturating the cotton with the acid and glycerine in small proportions, thus adding to their preservative properties the germ-filtering quality and elasticity of the cotton. The manner of producing the borated cotton is described in the specification as follows:

"I first prepare a solution of boracic acid in the usual manner, and add thereto a small proportion of glycerine. For the preservation of tender substances, such as veal, I may also add from 10 to 40 per cent. of soda or potash, never sufficient, however, to reach neutrality. The cotton, either in bulk or wadding, is next immersed in the solution until well impregnated therewith and then pressed to discharge all surplus solutions or so much thereof as may be required. The cotton is then dried and ready for use."

The claim is for "the borated cotton, being cotton fiber which is saturated with boracic acid and glycerine, substantially as herein shown and described."

102 The defenses are that the specification is not so clear and explicit as to enable a person skilled in the art to practice the invention, and that the patent is void for lack of novelty and

invention. Infringement is clearly established and is not denied in the brief submitted for the defendants.

In considering the question presented by the first defense it should be remembered that the language criticised by the defendants is addressed to persons skilled in the particular art to which it relates. To a lawyer or a banker the specification might seem vague, and, perhaps, meaningless, but a pharmacist, a chemist, or even an educated physician would have little difficulty in understanding it. When the patentee says he prepares "a solution of boracic acid in the usual manner," he means as it has formerly been prepared. He speaks of it as he would speak of a solution of camphor or alum. Every druggist knows what he means. He certainly might have been more definite when he says that he
103 adds to this solution "a small proportion of glycerine," but it is thought that the intelligent chemist, setting out properly to combine the enumerated ingredients into which the cotton is to be immersed and with which it is to be impregnated, could hardly go astray. Indeed, in examining the extracts introduced by the defendants to establish lack of novelty, copied from pharmaceutical journals of conceded reputation and authority, we find similar language used. Thus in the Druggists' Circular and Chemical Gazette it is stated that Dr. Edmunds had used "a solution of boracic acid," and in the Journal de Pharmacie it appears that Prof. Gubler saturated his wadding with "a certain quantity of glycerine." The formula for preparing this dressing is then given. "It is only necessary," says the writer, "to pour a small quantity of glycerine over the square sheet," etc. Such expressions would seem to belong to the nomenclature of the art. The expression "well impregnated" means thoroughly, completely impregnated, the word "well" being used in the sense that a housewife might use it when telling her domestic to keep the bread or the joint in
104 the oven until well done. Tested by the rule of Loom Co. *v.* Higgins, 105 U. S., 580, the specification would seem to be sufficient.

The article translated from the Journal de Pharmacie et de Chimie is not an anticipation. It is entitled "Glycerized Cotton for Dressing Wounds." There is no reference to boracic acid. Two of the elements of Am Ende's combination, boracic acid and water—the acid in solution—are wanting. True, it is stated that Prof. Gubler found this wadding permeable to all medicinal liquids, but there is no hint that he knew that with it could be combined the preservative properties of boracic acid in an unerystallized condition as a convenient, effective, and permanent antiseptic composition.

The article in the American Journal of Pharmacy of March, 1867, shows great familiarity with the characteristics and uses of glycerine on the part of the writer. He knew its excipient, hygroscopic, and penetrating properties. He knew that it was a solvent for boracic acid, but he certainly did not know—at least, he did
105 not divulge the knowledge—that it could be combined with dissolved boracic acid, and thus held in cotton fiber for antiseptic purposes.

The quotation from the Druggists' Circular of June, 1875, is entitled "Boracic Acid," and describes a case of amputation, in which the surgeon employed a "dressing of lint steeped in a hot saturated solution of boracic acid." This dressing was probably applied in a moist condition to the wound. No glycerine was used.

It cannot be demonstrated from the proofs that any one prior to Am Ende accomplished what he has described and claimed. Even though there be a doubt it should be resolved in favor of the patent. The fact that others had done something quite similar, that they had used separately or in different combinations the ingredients of his claim, should not affect his patent. All that is described in the prior publications the defendants may use with perfect impunity. They may use "lint steeped in a hot saturated solution of boracic acid," of "wadding saturated with a certain
106 quantity of glycerine" or boracic acid dissolved in glycerine, but they should not be permitted to use cotton saturated with a solution of boracic acid and glycerine in the manner described in the specification, for that belongs to Am Ende.

The complainant is entitled to the usual decree.

(Endorsed:) U. S. circuit court, southern district of New York. Charles G. Am Ende *vs.* Seabury and Johnson. Decision.—Coxe, J. (File-mark:) U. S. circuit court. Filed Nov. 15, 1888. John A. Shields, clerk.

107 At a stated term of the circuit court of the United States for the southern district of New York, in the second circuit, held at the court-rooms of said court, in the city of New York, on the 17th day of November, 1888.

Present: The Honorable Alfred C. Coxe, judge.

CHARLES G. AM ENDE, Complainant,
vs.
SEABURY AND JOHNSON, a Corporation, Defendant. } In Equity.

This cause having come on for final hearing upon the bill of complaint, the answer thereto of the defendant, the replication of the complainant to such answer, and proofs taken on the part of the complainant and on the part of the defendant, and Mr. Arthur v. Briesen having been heard on behalf of the complainant and Mr. Norman T. M. Melliss on behalf of the defendant:

108 Now, therefore, upon consideration thereof and on motion of Briesen, Steele & Knauth, solicitors for the complainant, and due deliberation had, it is hereby ordered, adjudged, and decreed that the letters patent of the United States issued to Charles G. Am Ende, complainant, on the 15th day of August, 1876, numbered 181,024, for borated cotton are good and valid in law, and that the complainant herein is entitled to the exclusive rights in, to, and under said letters patent and in and to the invention and composition secured thereby, and that the title thereto is duly vested in the complainant, and that the defendant has infringed upon the said letters patent and upon the exclusive rights of the complainant

thereunder by making, using, and vending to others to be used borated cotton made according to and employing and containing the invention and composition described in said letters patent and claimed in the claims thereof.

And it is further ordered, adjudged, and decreed that the complainant do recover from the defendant, Seabury and Johnson, the gains, profits, savings, and advantages which the said defendant has derived, received, or made by reason of the infringement
109 of the complainant's exclusive rights under said letters patent by any manufacture, use, or sale of borated cotton containing the invention and composition described in said letters patent and claimed in the claim thereof, and that the said complainant do also recover, in addition thereto, any and all damages which he has sustained by reason of such infringement of his exclusive rights by the said defendant; and it is hereby referred to John A. Shields, Esquire, as master (sufficient reason appearing therefor, it being for the convenience of parties and counsel), to ascertain, take, and state the quantity of borated cotton made and the quantity used and the quantity sold by the said defendant, Seabury and Johnson, in infringement of the claim of said letters patent, and the quantity of such borated cotton which the said defendant has on hand, and the gains, profits, savings, and advantages derived by the said defendant from and through the said infringements, and to assess the damages thereby suffered by the said complainant, and to report thereon to the court with all convenient speed; and the said defendant corporation, *is* Seabury & Johnson, and its
110 officers, directors, stockholders, managers, clerks, agents, and attorneys are hereby directed and required to attend before the said master, from time to time, as required by said master, and to produce before him such books, papers, exhibits, statements, vouchers, and documents as they may be directed by the said master to produce, and to submit to such oral or other examination as the master may direct.

And it is further ordered, adjudged, and decreed that a perpetual injunction be issued out of and under the seal of this court enjoining and restraining the defendant, Seabury and Johnson, and its officers, directors, managers, clerks, servants, agents, attorneys, and workmen and each and every of them from directly or indirectly making or causing to be made, delivering, vending, or causing to be sold, offering for sale, using or causing to be used in any manner any borated cotton or composition for borated cotton like or similar to those which the said defendant has heretofore made, used, or sold, containing or embodying the invention described in said letters patent, numbered 181,024, and claimed in the claim thereof, and
111 from counterfeiting or imitating the said invention and composition or any part or parts thereof in any way whatsoever.

And it is further ordered, adjudged, and decreed that the complainant do recover from the defendant, Seabury and Johnson, the costs, charges, and disbursements of this suit, to be taxed, and that

the question of increase of damages and all further questions be reserved until the coming in of the master's report.

(Signed) ALFRED C. COXE.

(Endorsed:) Circuit court of the United States for the southern district of New York, in the second circuit. Charles G. Am Ende *vs.* Seabury and Johnson Interlocutory decree. Briesen, Steele & Knauth, solicitors for complainant, 229 Broadway, New York.

(File-mark:) U. S. circuit court. Filed Nov. 19, 1888. John A. Shields, clerk.

112 (Original endorsed:)
Exceptions overruled.
Aug. 5, 1890.
(S'g'd) WM. J. WALLACE.

Circuit Court of the United States, for the Southern District of New York.

CHARLES G. AM ENDE, Complainant,
against
SEABURY & JOHNSON, Defendant.

Master's Report, Exceptions, and Testimony.

N. T. M. Melliss, solicitor for defendant.
Briesen & Knauth, solicitors for complainant.

(File mark:) U. S. circuit court. Filed Aug. 6, 1890. John A. Shields, clerk.

113 U. S. Circuit Court, Southern District of New York.

CHARLES G. AM ENDE
vs. In Equity.
SEABURY & JOHNSON.

Testimony taken under interlocutory decree dated November 19th, 1888, before John A. Shields, master, pursuant to notice.

NEW YORK, *November* 28, 1888.

Present: A. v. Briesen, Esq., of counsel for compl't, and N. T. M. Melliss, Esq., of counsel for def't.

Counsel for complainant moves the master for an order requiring defendant to produce at the next meeting a statement in writing, showing the quantity of borated cotton made by defendant, the quantity sold or delivered, and the quantity on hand, the amount received from sales and the cost of manufacture, and also that at the next meeting the president of the defendant company appear in person before the master, to be interrogated respecting said statement.

Counsel for complainant states that he will consent to an
114 adjournment at the request of the defendant to the 12th of December, 1888, at 11 a. m., for the purpose of enabling defendant to comply with the above order, if granted, such request having been made.

Counsel for defendant states that it will be impossible with the means that the defendant has in his business for so doing to procure the statement called for by complainant's counsel within two weeks; that to prepare such statement will require at least a month, if not more, but that the defendant will go on with making such statement, if ordered so to do by the master, with all due diligence.

Defendant's counsel further states that to order the attendance of the president of the defendant will not throw any light upon the subject as this part of the business is not under his immediate superintendence and therefore asks if an order be made requiring the personal attendance of a representative of the defendant, that it require the attendance of its chief book-keeper or other representative who may have charge of making up this statement, if so ordered, for the defendant, and asks the master to allow the defendant to reserve all rights to objections to the proceedings taken here to-day, if any, until the next hearing, because the defendant, through its counsel now present, retained Mr. E. H. Brown as counsel in this case, and that the counsel now present has not notified him to be present to-day.

Edwin H. Brown, Esq., here appears as counsel for defendant.

The master grants the order called for by complainant's counsel The account to be produced before him two weeks from to-day, to wit, December 12th, 1888, at 11 o'clock, a. m.

115 DECEMBER 22D, 1888.

Present: Counsel for respective parties.

GEORGE J. SEABURY, sworn, says: I am the president of the defendant company and have been ever since it was formed, since 1883. I produce the statement such as the master ordered. This statement is not true as to my personal knowledge, but when papers were served on us to make a statement I instructed our treasurer to take from our annual record the number of pounds of borated cotton sold, which statement I believe to be true. By annual record I mean a book which we keep for the purpose of recording the sales of the various articles manufactured by our concern, a corporation. Those annual records are made up semi-annually. They are made up from orders sent over and supplied to us by the factory, and such stock as we may have on hand at stocktaking at the warehouse, I mean taken from the inventory book. The annual records are made up of orders sent to the factory by the office and when received are so noted in our books, the quantities delivered. They are not made from the sales books, but we keep sales books. Our works are situated at East Orange on Glenwood avenue. Mr. William G. Crissey has charge of our factory. I do not think the annual records show the cost of the goods. In the statement made I

had to depend on the superintendent of the department and the superintendent of the works and the treasurer of the corporation. I am willing to swear that the statement I produce to-day is correct to the best of my knowledge and belief.

Q. The statement shows that what you sold in $\frac{1}{16}$-pound packages was always sold at a loss. Are you ready to swear that this was actually the case?

116 A. I am ready to swear to it if the treasurer says it is so.

Objected to as not responsive and motion made to strike the same out.

Motion granted.

Q. How do you figure the cost of those goods?

A. I figure the cost of those goods, or rather our people are instructed to calculate the cost of raw material, waste, cost of mechanical manipulation and the labor involved in perfecting the goods at the factory and the cost of sending the goods to the consumer, which represents the legitimate cost of disposing of manufactures or merchandise. I instructed our treasurer to fulfil the obligation of the master's order and if it does not show the cost of the goods on hand it is a misunderstanding.

Counsel for complainant asks the master to make an order that a statement showing the cost of the goods on had be furnished at the next meeting. Counsel also asks for an additional enlarged statement showing how the amount of cost in the statement furnished was computed.

Order granted.

The annual records which I have spoken of does not show what goods were sold for, they only show how many pounds we sell. We get at the price in the statement from the rates in the price current and discounts are printed then. We always give the same discounts. We make changes accordingly when we send goods to foreign countries. I cannot tell whether we ever sold goods without discounts without looking over the records, our sales book. I account for the large difference in the cost in bulk and the cost in small packages as it appears in the statement, on one hand, from the fact that the formulas on different lots of cotton were differ-

117 ent, some cost less and some cost more according to the formula. Then again manufacturers often make mistakes in calculating the cost of goods. I don't remember the different formulas now. The changes in the different formulas were made for the purpose of enabling us to twice card the cotton, as by the old process it was not produced satisfactorily from any manufacturer's point of view.

Q. Our witness Stack paid you at the rate of 15 cents for each of three-ounce packages of borated cotton. This would make the selling price $2.40 a pound, while your statement shows that it was sold for 68 cents a pound. How do you account for this remarkable difference?

A. I cannot account for it. I gave instructions not to sell any goods at retail in our establishment.

Counsel for complainant gives notice that he will read before the master the deposition of Maggie Stack, given in her deposition at final hearing. The statement is marked by the master, "Statement for Identification. J. A. S., master."

JANUARY 3, 1889.

Counsel for defendant produces statement showing cost of borated cotton on hand, pursuant to the order made by the master on the 22d of December, 1888.

JANUARY 10, 1889.

The defendant produces a supplementary statement showing how the amount of cost in the statements previously furnished herein by the defendant was computed in accordance with the order of the master made herein on December 22d, 1888.

The defendant also produces 67 sales or order books pursuant to request of counsel for complainant, and states that such books are all of the order or sales books belonging to the defendant
118 covering the period from or about July —, 1883, to November 22d, 1888, with the exception of four or five of such books which are now in use in the business, and defendant's counsel states that he will produce the last-mentioned books whenever the complainant wishes it.

The examination of Mr. SEABURY continued by A. v. BRIESEN, Esq.:

Q. When was Seabury & Johnson incorporated?

A. I think it was about 1883.

Q. Is the catalogue marked Seabury & Johnson Catalogue 1882 and 1883, one of the catalogues published by said company?

A. It looks like one. I have no reason to doubt that that is one of them. The three catalogues now shown me of 1885, 1886 and 1888 are the catalogues for those years respectively of our corporation, that is they have that appearance. I did not print them but I should say they are straight.

They are offered in evidence and marked respectively Exhibit Catalogue '82–'83, 1885, 1886 and 1888.

Q. Are the discounts you gave to purchasers of borated cotton the discounts you allowed your customers?

A. Yes, sir.

Q. And the prices given in these catalogues for borated cotton are the prices charged by you less the discounts charged therein?

A. To the best of my knowledge they are.

Q. Have you ever consented to furnish absorbent cotton at the rate of 25 cents per pound to purchasers?

A. We have. I think we put in a bid the other day for a very inferior kind, such as used by hospitals and which is not the kind from which we make our borated cotton.

119 Q. What have you paid for the cotton that has been used by you in the manufacture of borated cotton?

A. I can't tell without looking at the treasurer's statistics on that point.

Q. Are they here?

A. I can't tell, there is a pile of books here. I don't know whether they are in them or not. We bought this cotton of several parties. Hopkins, Dwight & Co. is one and then there is Munn & Co. I don't remember any others at present. The books will show. Mr. G. W. Hopping and his assistants keep the books. Mr. Hopping is at 21 Platt St. The books showing the price I paid for raw cotton are also at 21 Platt St. and not at the factory. I think the price I paid for boracic acid was about 30 cents a pound. I have got the bills. I think we generally bought it of Charles Pfiger & Co. Glycerine is in the neighborhood of 20 cents a pound; it may have been higher recently. I don't remember of whom we bought that. I don't do the buying, some one else does that. I think Mr. E. A. Sayre buys those goods, he is at 21 Platt St., you might call him buyer. We make the cartons in which the cotton is packed ourselves, we have bought some. W. G. Crissy superintends our factory since 1883, previous to him was J. W. Johnson, I think.

Q. Why did you not include in the statement heretofore presented by you the borated cotton made previous to July, 1883?

Objected to because the question assumes that some was made previous to that date. Overruled. Exception.

A. Because I did not understand that they wanted any different statement than that based on the assumption that they claimed glycerine as a solvent of boracic acid.

We sold borated cotton before July, 1883.

It is prepared by boiling the boracic acid in water, then dipping the already prepared absorbent cotton in a finished state and
120 dipping it in the boracic acid solution and drying it; that had no glycerine. I can only judge about the time, July 1st, 1883, being the time when we first used the glycerine from the best of my recollection. I can't say whether our books will show or not when we first used the glycerine. Mr. Am Ende did not notify me to my knowledge that I infringed his patent, nor did I ever know that such a patent existed until this suit was commenced, when I was notified by his attorneys. Answers 21 to 24 of Mr. Am Ende's deposition at final hearing, having been read to me, I will say that I have no recollection of any such conversation having occurred between us.

Q. Will you say that what Mr. Am Ende has there testified to is untrue?

A. I don't remember any such conversation. I am acquainted with Mr. Am Ende.

Counsel for complainant gives notice that he will read before the master the deposition of Mr. Am Ende given at final hearing.

A. I have not read the deposition of Mr. Williams in this cause.

He is in the employ of the defendannt, he has been with us about two years to the best of my recollection. He is a chemist in the laboratory, which is in Orange, New Jersey.

Counsel for complainant asks for an order requiring the defendant to produce an itemized statement showing all the sales of borated cotton involved in this suit, the dates of sales, the amounts at which the goods were sold, the names of the parties to whom sold, and also an itemized statement showing the cost to the defendant of the crude cotton entering into said borated cotton, the cost of boracic acid and of glycerine and the actual cost of manufacture of said borated cotton, and the actual cost of packages containing the same.

The master so ordered.

121 FEBRUARY 27TH, 1889.

Counsel for defendant produces a statement pursuant to the order made by the master in this proceeding on the 10th day of January, 1889, the same being in three parts, marked statements A, B, and C.

MARCH 7TH, 1889.

The testimony of the defendant's president, Mr. SEABURY, continued:

Statement A is a statement of the items of borated cotton sold by the defendant between July 1st, 1883, and November 22d, 1888, inclusive. The word "price" on top of a column of each page of this exhibit refers to the price at which the borated cotton was sold. This is the catalogue price. The next column headed "gross amount" means the amount that the goods ordered amount to without discount. The next column headed "discount" shows the discount granted in each case where any was allowed and the last column headed "net amount" shows the net amount which the company received for the goods.

This statement A was prepared at my request by the treasurer, Mr. J. M. Peters, and I directed him to prepare a statement which should be confined to the master's order of January 10th, 1889.

I don't know of my own knowledge whether the statement A is correct, but believe that it is.

As to statement B, I don't know why the period from July 1st, to October 1st, 1883, was selected specially instead of the whole period from July 1st, 1883, to November 22d, 1888. This statement B, was also prepared by the treasurer, Mr. Peters, under my instruction, and likewise statement C. I gave the treasurer instructions how to compute the cost of goods from the time we got the raw material until they were disposed of to the consumer and paid
122 for. The defendant manufactures nearly every article mentioned in the catalogues which have been put in evidence. There may be a few articles that we purchase in the market, that are not of our manufacture. I instructed the treasurer to deduct from the profits a certain percentage in each case for selling. I don't know what the percentage is of my own knowledge, because

I instructed him to compute it from the books. I mean the proportionate amount we charged against the branch of our business covered by this statement. The branch covered by this statement refers solely to borated cotton.

I cannot account for the different figures shown as the total amount of borated cotton sold by the defendant exhibited by the statement offered in evidence on December 22d, 1888, and the statements A, B, and C, also offered in evidence. The treasurer will enlighten you on that subject.

MARCH 14TH, 1889.

JOHN M. PETERS, a witness called for the complainant, having been duly sworn, testifies as follows:

Direct examination by Mr. KNAUTH:

My name is John M. Peters. I reside in Brooklyn, N. Y., and I am the treasurer of the defendant corporation. I have been such treasurer since July, 1885. I am familiar with the manner in which the defendant's business is conducted. I have practical charge of the financial department in defendant's business, and am also familiar with the mode of manufacture of borated cotton as carried on by the defendant. The absorbent cotton which is mentioned in statement B, which is in evidence was bought from others at 24 cents per pound during the period of July 1st, 1883, to October 1st, 1883. After October, 1883, we made
123 absorbent cotton ourselves, although a portion of the absorbent cotton which we used afterwards, was a remainder of the cotton bought during the first-named period. We bought the absorbent cotton from two firms. I think the Lancaster mills of Clinton, Mass., and Clapp & Son of Dedham, Mass. It is to the best of my recollection. So far as I know we did not sell any borated cotton to them. The glycerine and boracic acid which are mentioned in the statement B were bought in the market: the figures $17.34 and $18.23 are the average price which we paid for those articles during the period July 1st, 1883, to November 22d, 1888. I arrived at this average by adding the proceeds of glycerine together which we had bought through that period; also by adding the dollars and cents together which we had paid for it, and dividing the amount paid for it by the number of pounds bought. I did the same thing to arrive at the average price of the boric acid. The item of $1 for labor in statement B is the cost of labor on 100 pounds of cotton, as determined by our factory superintendent from actual experience in making the goods. The amount of $1.30, stated in statement B, as the cost of labor and wrappers upon packing 130 pounds borated cotton in bulk, was arrived at in a similar way from the careful calculations of the superintendent. Of those calculations I have no personal knowledge, it being the business of the superintendent to make them. I believe them to be true. The word "bulk" refers to a certain pound package which we call by that name. The packing cases mentioned in statement B are wooden cases in which the borated cotton is shipped. In the items of gen-

eral expense of factory, mentioned in statement B, are included those charges which cannot be specifically charged to any one article, such as fuel, salary of superintendent, and firemen, cost of repairs, taxes on the factory property and so forth. These expenses we find by averaging a series of years, amount to 30 per cent.
124 upon the cost of merchandize, materials and labor employed in converting it, which can be charged specifically. The defendant company manufactures a large number of different articles, and the expense of manufacturing them is also quite different. I am not now at present prepared to give the items of this general expense more specifically. The antiseptic department, which includes the manufacture of borated cotton is the most expensive department.

We find that by taking the result of our business for a series of years, that the average cost of doing business which represents the expenses of travellers, rent of store, interest on capital employed in selling goods, advertising, clerk hire, freights and discounts, is 50 per cent. on the cost of the manufactured goods. We keep no separate books which would show the items of this expense of doing business for the antiseptic department, or for borated cotton. It would be impossible to do so. It would also be impossible to compute it, because this is but one of a number of items which have a different cost of manufacturing or selling. I arrived at this 50 per cent. for business expenses, by computing the general business expenses for three years, beginning with the year 1886, I believe. We compute six months periods in our business. I found by these computations, that the percentage varied from either 46 or 48 per cent. to about 62 per cent., and I therefore took 50 per cent., which the computations convince me would be a minimum average, for all of the years covered by this statement. I also prepared a statement submitted by the defendant on January 3d, 1889. We still have on hand the borated cotton which was stated to be unsold in that statement.

On page 2 of statement B, 130 cartons at 830, means at 830 per thousand. The same explanation applies right through. On the second page of statement B the computation of the cost of "pounds" is given, which is incomplete, as it does not contain any
125 charge for labor. I find that the item of labor on half pounds on that page is 81.30, which is one-half cent per carton; the same item of 81.30 on quarter pounds is, one-quarter of a cent on 520 cartons; in the item of 85.20 for labor on eight pounds on the following page, one-half cent is charged per carton; in the next item of 86.50 for labor on sixteenths pound the charge is five-sixteenths of a cent per carton. These items are reported to me by the superintendent and I can only account for the differences by the fact that while the aggregate cost of putting up the quantity of cotton in packages of different sizes is readily determinable, it is almost impossible to calculate exactly the proportion of cost which a package of one size bears to another. I know of no reason why it should cost more per carton in an eight-pound carton than a quarter-pound carton, although it costs considerably more per pound

to pack cotton in eighths than in quarters. The superintendent would be the competent party to explain this item of labor.

I don't know whether the cost of the raw materials which go into the various articles manufactured by defendant, is higher or lower in proportion to the price of sale in the other articles than in borated cotton. I am unable to answer without taking time and making a calculation. On the last sheet of statement B there are two items in the computation of the cost of absorbent cotton, viz: Labor $1.70, and carding twice and lapping $4.68; these two items I have based upon the statements of our superintendent as to the cost of doing this work. The last item on the last page of Exhibit B gives the cost of the articles in cents per pound. The total of pounds of borated cotton manufactured by the defendant from July, 1883, to November 22d, 1888, is 17,556 pounds. The statement of 16,972 pounds, a total of borated cotton sold between the same period contained in the statement made by defendant, pursuant to master's order of November 28th, 1888, and submitted January 3d,
126 1889. I prepared that statement, and caused it to be signed with my name. When that statement was prepared, I computed the amount of borated cotton which we had on hand, and allowed the remainder to stand as our sales; but on account of the limited time allowed us in preparing this statement I did not make it as carefully from the items in our books, as I made the statements A, B and C, produced pursuant to master's order, January 10th, 1889. The difference of about 500 pounds between the sales as stated in the statement produced, pursuant to master's order November 28th, 1888, and those actually shown in statement A, produced pursuant to master's order January 10th, 1889, represents the amount of borated cotton which has been destroyed in our possession during the period covered by this accounting, or had been lost, given away, or otherwise disposed of and not sold.

I find that the statement C mentions 234 pounds sold in bulk between July 1st, 1883, and October 1st, 1883, and again 1,050 pounds sold in bulk between October 1st, 1883, and November 22d, 1888, while the former statement of January 3d, 1889, showed only 50 pounds sold in bulk. I can only account for that difference by the fact that the first statement was based on the factory records in which they may not always have distinguished between bulk and pounds, whereas the last statement was based upon our record of actual sales, and is therefore correct.

It may have happened also that we have sold, delivered on orders for bulk cotton and at the price of bulk cotton the regular pound packages when we had no bulk cotton in stock and wished to avoid delay in filling orders. The actual amount of borated cotton which we have sold is 16,483$\frac{3}{16}$ths pounds, and we have 584 pounds on hand. Statement C is correct, to the best of my knowl-
edge and belief. In statement C, I have included in the
127 amounts given in the column showing the cost in cents per pound, the amount of general expense (30 per cent.), and the amount of business expense (50 per cent.), which I have above referred to. The items shown in the column entitled "Aggregate

proceeds from sales" in statement C, are computed from the detailed record of sales contained in statement A, and show the aggregate net sums received by us during the periods covered by that statement for borated cotton in each different size of package.

Mr. WILLIAM G. CRISSEY, a witness produced in obedience to the call by complainant's counsel, who being duly sworn, testifies as follows:

My name is William G. Crissey; age, 47 years. I am superintendent of Seabury & Johnson's factory at East Orange, New Jersey. I know what the cost of labor is for manufacturing borated cotton.

The cost of labor in the manufacture of borated cotton, the labor in half pounds would be about $1.30 for 130 pounds, that is one cent a pound. The cost of labor on 100 pounds in bulk is $1 labor for putting up. I arrive at these figures by actual test and the price paid.

Q. Give me the itemized statement showing how you arrived at such cost of labor?

A. I can't give it to you to-day.

Q. Did you assist in preparing the statement which is marked for identification by the master on the 22d December, 1888, and which is now the 8th page of the master's record?

A. Yes, sir; as far as it relates to cost per pound.

Q. In that statement the cost per pound in half pound packages is given at a little more than half a cent per pound. How do you account for the fact that you now testify it is one cent a pound?

A. I don't understand that the statement was put in at half a cent a pound.

128 Q. The statement says under the heading cost cents a pound 56.85 on the line of the half-pound packages, does it not?

A. It so reads.

Q. What does that mean?

A. It means that the cotton cost finished 56 85 one hundred cent. per pound.

Q. Now, what I desire is to give me an itemized statement showing how that cost was arrived at?

A. I can't do it.

Q. You can give me an itemized statement, can you, showing how the cost of labor is arrived at?

A. Yes, sir; but not to-day, as I will have to figure it out at the factory from my reference book.

Q. Does that reference book show specifically what the labor on borated cotton did cost?

A. No, sir. We make no difference between borated cotton and absorbent cotton so far as the labor is concerned.

Q. Are you also able to state what it costs defendant to sell borated cotton?

A. No, sir; I have nothing to do with that part of the business.

APRIL 3D, 1889.

Q. Are you now able to present the figures by which you computed the item of labor entering into the computation of the cost of making borated cotton at the defendant's establishment?

A. Yes, sir; we take 100 pounds of cotton, one man, $1\frac{3}{4}$ hours, at $2.50 a day, that will come to 48 cents; one man, $1\frac{3}{4}$ hours, at $1.50, that will amount to 28.87 cents; one man, $1\frac{1}{2}$ hours, at $1.50 a day, will be 24.75 of a cent. The footings of all those items will give you $1.01.62 of a cent. Now, on a second test, one man, $1\frac{3}{4}$ hours, at $2.50—48 cents; one man, $1\frac{1}{2}$ hours, at $1.50 a day will be 24.75 of a cent; another man, at the same price and same time, 24.75 of a cent. The total of these figures will be 97.50 cents. Now, add your one dollar one cent, and $\frac{62}{100}$ of a cent gives you $1.99.12
129 of a cent. Dividing that by 2 gives you an average price of 99.56 cents per 100 pounds; or, say 1 cent a pound, or $1 a hundred. This is the method by which we arrive at the item "labor" $1, on page 1 of statement B.

Q. What were those three men doing who you have stated to be at work on the borated cotton?

A. They were mixing the solution, getting the cotton, putting it through the solution, wringing it, taking down, and putting up in the dry-room.

Q. Can you give us the figures by which the items of general expense of factory are computed in statement B?

A. I cannot.

Q. Do you know how those items of general expense of factory were computed in statement B?

A. I do not; only from hearsay.

Q. Did you compute those items in statement B?

A. No, sir; I did not.

Q. Do you know who computed them?

A. Only from hearsay. I am informed that either Mr. Peters or Mr. Hopping computed them.

Q. Can you explain why in statement B, under the item quarter pounds, the labor is stated to be $\frac{1}{3}$, while under the following item, eighths of pounds, the labor is stated to be $\frac{5}{20}$?

A. It is more labor to put up cotton in eighths of pounds than it is in quarters.

Q. Have you computed the item of labor contained in the statement of cost of eighths of pounds in statement B?

A. No, sir.

Q. You are not prepared to give us the items which make up this figure $5.20 for labor?

A. I am prepared. In '85 and '86 it was piece-work. In '85 the price paid for bulk pounds, half pounds, quarter pounds, was one cent a pound. For eighths of pounds, seven cents a pound; sixteenths of pounds, nine cents a pound. In '86, bulk pounds, half pounds, and quarters, was one cent a pound; eighths, four
130 cents a pound; sixteenths, five cents a pound. In '87 we took 200 pounds and packed it in ounces. The cost and

time as follows: Five girls, one day, 83⅓ cents a day is $4.16; four girls, at 75 cents a day, $3; six girls, at 50 cents a day, $3, making a total of $10.16. Dividing that by 2, gives a little over five cents a pound (5 1/16 cents a pound). About the same date we took 50 pounds of cotton and packed in pounds, at an expense of five girls for one hour, at 83⅓ cents per day of 9 hours, that is 9.2 cents for a girl, making a total of 46 cents to pack 50 pounds of cotton in pounds; or say one cent a pound. We thus establish the price of pound packages at one cent a pound, and sixteenths at five cents a pound, and from these two determine (they being the extremes) the cost of intermediate sizes, namely, bulk pounds, half pounds, quarters, one cent a pound; eighths, four cents a pound; sixteenths, five cents a pounds.

Q. Are you able to explain how the items of general expense of factory in statement B have been computed?

A. No, sir.

Q. How is the item carding twice and lapping on the last page of statement B computed, if you know?

A. In February or March, 1877, we made a test case on a thousand pounds of cotton. To lap and card once the cost is as follows: One man to lap two days, $4. One man to card three days, $6; one man, one and one-half days on cards and lapping, $7.50; one boy, three days, 75 cents a day, $2.25; oil, 1 gallon, 50 cents. The total of those amounts will be $20.25, multiplying it by 2, as details given as once carding and lapping, gives you $40.50. Dividing this $40.50 by 1,000 gives you four cents a pound plus. Now, by multiplying 117 pounds of cotton by 4 cents gives you $4.68.

131 APRIL 8TH, 1889.

Mr. GEORGE W. HOPPING, a witness produced on the part of the complainant, being duly sworn, testifies as follows:

1 Q. Please state your name, age, residence and occupation.

A. George W. Hopping; age, 43 years; I reside in Bloomfield, New Jersey. I am cashier for Seabury & Johnson.

2 Q. I call your attention to statement B, furnished by the defendant in this case, and more particularly to the item of 30 per cent. on cost of borated cotton for general expense of factory. Can you explain how this item of 30 per cent. was computed?

A. The 30 per cent. item general expense of factory is arrived at by taking general expenses, fuel, freight, insurance, salaries of superintendent, firemen, engineers, carmen, foremen and assistant foremen. I think that covers all the items.

3 Q. How did you make the computation of which 30 per cent. of actual cost was the result as stated in statement B?

A. By taking figures as stated above from our semi-annual statement.

4 Q. I want to know how you came to state that it actually costs the defendants 30 per cent. more than you can itemize to produce borated cotton?

A. Well, simply because they are general expenses that can't be

distributed such as salaries of the superintendent, whose time is not given solely to any one branch of manufacture, and of foremen and assistant foremen whose time is given to all the operations of their respective departments, fuel that supplies the motive power for the whole factory. The same remarks apply to insurance and current expenses.

5 Q. Can you not make it clear what computations you made to arrive at this result?

132 A. I took the sum total of the salaries of superintendent, foremen and assistants, general expense, fuel, freights, insurance, etc., and calculated what percentage they bore to the cost of crude merchandise with the current expenses of the departments and pay-rolls of the departments added after deducting from the department pay-roll the salaries of foremen and assistant foremen, also including interest on capital invested.

6 Q. Is it not a fact that the cost of producing the crude merchandise is very different in different articles which the defendants produce?

A. We do not produce the crude merchandise mentioned in my last answer but buy it.

7 Q. Have you the items of your computation here?

A. I have. For the last six months of 1888, merchandise used at factory $65,910.55; expense of departments, $791.33; pay-roll of departments exclusive of foremen, assistants, etc., $14,573.40; gives total of $81,275.28. General expenses including fuel, freights, insurance, $6,482.07. General pay-roll including foremen, assistants, etc., $9,407.10. Interest on $94,700 real estate, $2,841. Interest on plant and manufactured stock on hand, $164,516; equals $4,935.48. Loss on furniture and machinery, $2,630.81; total $26,275.46. Grand total $107,550.46, which is the cost of merchandise delivered at 21 Platt street, the defendant's office in New York, from which all sales are made with slight exceptions. We take this item of $26,275.46 and compute what percentage it is of $81,275.28. By taking a series of six months periods for 1886, 1887 and 1888, we found this average to be about 30 per cent.

8 Q. Do you consider this average of 30 per cent. a fair average of general expenses of factory in defendant's business from July 1st, 1883, to the present time?

A. I do.

9 Q. And it was on this basis that to the items of cost of borated cotton given in statement B, 30 per cent. was added for general expense of factory?

133 A. Yes.

10 Q. In computing this item of 30 per cent. have you taken the cost of every article alike, whether the amount of labor expended on it was small or large?

A. Yes.

11 Q. What is the amount of capital invested in defendant's business?

A. Capital invested in plant and stock on hand, exclusive of real

estate, which includes bare walls, was on December 31st, 1888, $164,516.

12 Q. Is this the only way by which you can compute the general expenses which in defendant's factory are chargeable to the making of borated cotton?

A. There is no other way.

13 Q. Is it not a fact that some articles require a great deal of the attention of the foreman and assistant foremen, while the other articles require less?

A. I am not competent to answer that question, but I don't think there is much difference in the amount of supervision required.

14 Q. Do you know how many men the defendants employ on borated cotton?

A. I don't know.

15 Q. Why have you excluded in the item of pay-roll of departments $14,573.40, the charge of foremen and assistants?

A. Because their services are general and not applied directly to the manufacture of the goods.

16 Q. Do you mean that they superintend more than the manufacture of one article?

A. Yes, more than one kind of article.

17 Q. Can you tell me what item in the item of $6,482.07 for fuel, freights and insurance is chargeable to coal or fuel alone?

A. No, I have not the items. I can get them.

18 Q. Can you give me the proportion of the defendant's production of borated cotton to the defendant's general production?

A. I cannot.

134 19 Q. What is the total production of defendant's factory per year?

A. I couldn't give it very close; no.

20 Q. Will you give us the total output in sales of the defendant's factory for each year since July 1st, 1883, in dollars and cents?

APRIL 24, 1889.

Witness refuses to answer Q. 20 under advice of counsel. Defendant's counsel objects to Q. 20 on the ground that the total output in sales of the defendant's factory for the years named in the question is irrelevant and immaterial and because, if given, it would not aid in ascertaining the amount of profits received by the defendant from borated cotton during the period under investigation.

21 Q. Have you any objection personally, or as an employee of defendant corporation, to answer the question, or do you simply refuse to answer it by advice of your counsel?

A. Personally, no; as an employee, yes, unless so advised by my employer's counsel.

22 Q. Did the total amount of sales made by the defendant figure as an item in your computation of the general expense of factory or selling expense?

A. No.

23 Q. How did you figure the selling expense, which is charged as 50 per cent. of the total cost in statement B?

A. By taking the actual cost of merchandise with the factory expenses added and calculating what percentage the total store expenses are of that amount.

24 Q. Do you mean that you first compute all the expenses which you have in order to sell the article exclusive of factory expense, and that you then compute what proportion this figure bears to the actual cost of merchandise used by the defendant during the same period, and the factory expenses added thereto?

135 A. Yes.

25 Q. Do the sums expended for advertising go into this computation?

A. Yes.

26 Q. Do you know whether defendant has advertised borated cotton beyond putting it into the catalogue?

A. I do not.

27 Q. But you are aware, are you, that the defendant has very largely advertised "Benson's capcine"?

A. Yes.

28 Q. Do you know how many thousand dollars have been spent in any one year by the defendant in advertising "Benson's capcine"?

A. No.

29 Q. Can you give the amount approximately for any one year?

A. No.

30 Q. Have you ever been in defendant's factory?

A. Yes.

31 Q. Are you pretty well acquainted with it?

A. Yes.

32 Q. Defendant has a large amount of machinery, hasn't he?

A. Yes.

33 Q. Do you know what is the value of the carding machinery which is shown on page 38 of defendant's catalogue for 1888?

A. No.

34 Q. Do you know what is the value of the machinery in the printing department, shown on page 66 of the same catalogue?

A. No.

35 Q. Do you know what is the value of the machinery used in defendant's rubber department and some of which is shown on page 12 of the same catalogue?

A. No.

136 36 Q. Does the defendant use any machinery for making porous plasters and other plasters?

A. Yes.

37 Q. Do you know its value?

A. No.

38 Q. Have you any opinion about its value?

A. No.

Mr. CHARLES G. AM ENDE, the complainant, called and duly sworn, testifies as follows:

1 Q. Are you the complainant in this case?
A. I am.
2 Q. What is your occupation?
A. Manufacturing chemist.
3 Q. Do you manufacture borated cotton yourself according to the invention of the patent in suit?
A. I do not do it personally.
4 Q. How do you do it?
A. A woman makes it.
5 Q. Does she make it under your supervision?
A. She does not.
6 Q. Who taught her to make it?
A. Another woman?
7 Q. Are both these women in your employ?
A. They are.
8 Q. Did you impart the information originally to them to make borated cotton?
A. I did.
9 Q. And they have been making it while in your employ, on your premises and on your account?
A. They have.
10 Q. How long have you thus been manufacturing borated cotton?
A. Since when I applied for the patent. I can't give you the exact date without looking at the patent.
11 Q. Was it before 1883 that you commenced?
A. I do not think it was. I don't remember the date of the
137 application. On looking at the patent I find that I did.
12 Q. Describe what operations are necessary to make borated cotton, and how it is made in your establishment.
A. We make a solution of boracic acid with water, add glycerine to it, filter the solution, steep into it absorbent cotton in the proportion that for every one pound of absorbent cotton is used one-half gallon of this solution, knead it so that the solution equally permeates the absorbent cotton, then place it on racks for drying, and when dried the borated cotton is ready.
13 Q. Is all this done by hand in your establishment, or do you use any machinery for it?
A. It is all done by hand and no machinery is used in the manufacture.
14 Q. How many employees have you to attend to the making of borated cotton?
A. At present one—a woman.
15 Q. What wages does she get?
A. Six dollars a week.
16 Q. Where is your manufacturing establishment?
A. At Union Hill, New Jersey.
17 Q. State what buildings it consists of?

A. It consists of one building, two story, 25 by 35. Another building used for making up absorbent cotton and boiling other dressings, making chemical preparations, carding absorbent cotton, with rooms for drying. Dimensions approximately 40 by 50, and in part of two stories, besides separate storage room for raw material, bottles, &c.

18 Q. Do you reside on the same premises?

A. I do, in an adjoining building which I own.

19 Q. How much ground do you altogether occupy at Union Hill?

A. Eight full lots.

20 Q. Are you manufacturing other articles than borated
138 cotton, and, if so, what proportion of your business is the percentage by the manufacture of borated cotton?

A. I do manufacture other articles besides borated cotton, and borated cotton is nearly 5 per cent. of the general business of last year.

21 Q. Are you familiar enough with the items of expenditure connected with the manufacture and sale of borated cotton to give an opinion as to what it would cost to make this article and sell it?

Ans. I am.

22 Q. Have you examined the statement produced by the defendant herein marked Statement B, and Statement C, and do you understand the same?

A. I have examined them and I do understand them.

23 Q. Please look at Statement B, and state whether the item contained in the first paragraph of it concerning the manufacture of 130 pounds of borated cotton are proper items of expenditure according to your experience, and if not, how they should be corrected.

A. The items are proper, corrections should be made for 100 pounds of absorbent cotton, which I do make myself according to the figure of $20.84 a hundred pounds as given by the defendant on the 4th page of the same statement. Fifteen pounds of glycerine is right at $2.60, 15 pounds of boracic acid is right at $2.73, labor is right at $1, making total cost of 130 pounds of borated cotton produced $27.17.

24 Q. Now, please state what the cost of preparing borated cotton in different-sized packages have been in your experience, following as close as possible the order adopted in Statement B.

A. In bulk 130 pounds of borated cotton $27.17, labor and wrappers $1.30, labels 50 cts., packing cases cost me $1.20, making a total for 130 pounds of $30.17. In pounds, 130 pounds of borated cotton $27.17, 130 cartons $3.90, labels 45 cts., and packed in pounds I need
packing cases $1.60, total $33.12. Half pounds, 130 pounds
139 of borated cotton $27.17, cartons $6.40, labor $1.30, labels 13 cts., packing cases $1.60, total $36.60. Quarter pounds, 130 pounds of borated cotton $27.17, cartons $8.26, labor $1.30, labels 65 cts., packing cases $1.60, total $38.98. Eighth pounds, 130 pounds of borated cotton $27.17, cartons $9.72, labor $2.60, labels $1.30, packing cases $1.60, total $42.39. Sixteenth pounds, 130

pounds of borated cotton $27.17, 2,080 cartons printed $14.56, labor $6.00, packing cases $1.60, total $49.33.

25 Q. Are the figures which you have here given the figures of actual cost, according to your experience, in manufacturing borated cotton, since you commenced its manufacture?

A. When I first commenced it I bought the absorbent cotton for a year or two, since then I made the absorbent cotton myself, and the figures are right according to my experience.

26 Q. How many packing cases do you use to pack 130 pounds?

A. In bulk I don't need fully three, but have calculated the cost for three full. In packages I need nearly four cases.

27 Q. Have you computed what it costs you in general factory expenses in addition to the expenses already itemized to produce borated cotton?

A. I have.

28 Q. Please state what the general expenses of your factory, chargeable to borated cotton, have been for the years 1887 and 1888, beyond those itemized already.

A. The first item is coal. During the summer months I use no coal for drying borated cotton, but used the natural summer warmth. During the same summer months I use coal for other general factory purposes, and then I have to add to them in winter coal to the amount of $79.68. The coal consumed during the summer is not used in the manufacture of borated cotton. For convenient computation I have taken $84, instead of $79.68, already mentioned,
140 and this is computed from the consumption of coal for the last 18 months ending March 31st, 1889.

This coal ($84) heats, first, a two-story dwelling-house. Second, a room of about 34 by 18 feet for the drying of absorbent cotton at about 70 to 75 degrees. Third, the factory building of two floors, each 35 by 25 feet, the lower floor used as a package and storage room and on the upper floor are four racks for drying borated cotton and ten racks for absorbent cotton, other medicated cottons, and there is room to hand up and dry antiseptic gauzes.

The dwelling house requires more than one-fourth of the amount of coal for heating purposes, and I have used one-third of the amount of coal for heating the house alone in the previous winter.

I assume that one-quarter the amount of coal will heat the floor where the borated cotton dries, abundantly, gives $21; one-third of this will be ample to dry the borated cotton on this floor; about one-fourth of this room is ample space for drying borated cotton. This makes the expense of coal required to dry borated cotton $7 a year.

The next item is the machinist, labor. He gets $520 a year, and the proportion of his services which is chargeable to borated cotton is the same as the proportion of coal consumed for borated cotton to the whole coal. The entire consumption of coal a year is $548.74, and I calculate $7 on his $520. Machinist thus costs $7 a year on borated cotton.

Insurance. For the years 1887 and 1888, my insurance was $62.50 a year. The amount of borated cotton sold in proportion to

the other articles sold by me is 4.04 per cent. of the whole. This makes the proportion for borated cotton upon insurance $2.82.

MAY 9TH, 1889.

The next item is capital invested. The whole manufacturing of borated cotton is carried on in the two-story frame building
141 worth, with the lot on which it stands, about $28,000. Borated cotton is about 4.4ths per cent. of what is manufactured in that house, equal to $123.20, and at 8 per cent. of $140 is $9.85.

I consider a rental of 8 per cent. including repairs and taxes a fair rental.

Repairs for the last three years have been $20.25, and are already included in the 8 per cent. Taxes are $103 per year on the whole plant, residence and ground of 8 lots of land included in 8 per cent. The water tax is not 25 per cent. per annum on the water used, because the water passing through the steam pipes for heating goes back and is collected as distilled water, also included in rent.

Total for coal	$87 00
Machine	7 00
Insurance	2 81
Rent	9 85
	$26 66

This computation is made for 1888. For the years from 1883 to 1886 and 1887, the cost of production in my factory was still less than that given, because rental was lower and there was more business done, which always cheapens the cost of production.

General Expenses of Doing Business.

(Selling expenses). workman, who acts also as driver receives per year $520, employed half of his time at this business	$260 00
Cost per year	250 00
Wagon per year including repairs	10 00
Ferriage per year	75 00
Postal stamps and stationery per year	200 00
Advertising per year	50 00
	$745 00

Borated cotton furnishes 4.4 per cent. of the whole output of Am Ende's factory, and ought therefore to be charged with 4.4
142 per cent. of the expense of doing business. 4.4 per cent. of $745 is equal to $32.78.

The total sales of borated cotton for January 1st, 1888, to November 22d, 1888.

Bulk, 274 pounds	$180 55
Pounds, 127 pounds	106 50
Half pounds, 81 pounds	62 75
Quarter-pounds, 69 pounds	53 20
One-sixteenth pounds, 151½ pounds	156 40
Total 702½ pounds	$559 40

According to the statements of the itemized cost in the manufacture of borated cotton, the cost of these quantities is as follows:

Bulks cost $30.17 per hundred and thirty pounds, that is for 274 pounds	$63 59
Pounds cost $33.12 for 130 pounds, that is for 81 pounds	22 80
Quarter pounds cost $38.98 for 130 pounds, that is 69 pounds	20 69
Sixteenths cost $49.33 for 130 pounds, that is for 151½	57 49
Total itemized cost of 702½ pounds is	$196 93
Add general factory expenses on 702½ pounds as stated above	26 66
Total	$223 59
Add general selling expenses on 702½ pounds as stated above	32 78
Total cost	$256 37

If the total itemized expense of 702½ pounds is $196.93, and the general factory expense of the same number of pounds is $26.66, then there is 13.54 per cent. of the total itemized cost.

Computation of percentage of general selling expense 702½ pounds, cost general factory expense	26 66
It gives you a total	$223 59

143 If 702½ pounds cost to sell $32.78, then this is equal to $14\frac{66}{100}$ per cent. of $223'59, that is, itemized and general factory expenses added together.

Total sales of borated cotton by Am. Ende between January 1st, 1888, and November 22nd, 1888:

Bulk, 274 pounds cost	$63 59
Add general factory expense, $13\frac{54}{100}$ per cent	8 61
Total	$72 20
Add selling expense, $14\frac{66}{100}$ per cent. on the above, equal to	10 58
Total	$82 78

Therefore, one pound bulk cost me altogether, $0.302117.	
Pounds, 127 pounds cost	$32 36
Add general factory expense, $13\frac{54}{100}$ per cent	4 38
Together	$36 74
Add general selling expense, 14.66 per cent	5 39
Makes together	$42 13
Therefore one pound in pounds, cost me altogether, $0.331779.	
Half pounds, 81 pounds cost	22 80
Add general factory expense, 13.54 per cent	3 08
Together	$25 88
Add selling expense, 14.66 per cent. on above	3 79
Total	$29 67
144 Therefore, one pound in half pounds costs altogether, $0.366296.	
Quarter pounds, 69 pounds cost	20 69
Add general factory expense, 13.54 per cent	2 60
Together	$23 49
Add selling expense, 14.66 per cent. as above	3 44
Total	$26 93
Therefore one pound in quarter pounds costs altogether $0.390289.	
Sixteenths pounds, $151\frac{1}{2}$ pounds cost	$57 49
Add general factory expense, 13.54 per cent	7 78
	$65 27
Add selling expense, $14\frac{66}{100}$ per cent. on above, equal to	9 57
	$74 84
Therefore one pound in 16ths cost him altogether, $0.492013.	
Total cost of $702\frac{1}{2}$ pounds as above stated will be found to be	$256 35

29 Q. Have you in the foregoing computation referred to all the items which go into the expenditure incidental to the manufacture and sale of borated cotton at your establishment?

A. I have.

30 Q. Have you personally superintended the manner and manufacture and sale of this article in such way as to be familiar with the items of cost of both?

A. I have.

31 Q. Have you computed how much it would have cost you to manufacture and sell the various quantities of borated cotton specified in Statements B and C?

145 A. I have.

32 Q. Have you made this computation on the basis of the figures already stated by you in describing your cost of manufacturing and selling borated cotton?

A. I have.

33 Q. Now state to — what the result of this computation is?

A.—

Seabury & Johnson received for 1,284 pounds bulk..	$677 56
These would have cost me at $0.302117.....	387 92
Profit.....	$289 94
Which would be a profit of $0.2256 per pound.	
Seabury & Johnson received for 4,890 pounds in pounds	$2,871 81
These would have cost me at $0.331779 per pound.....	1,622 40
Profit.....	$1,249 41
Which would be a profit of $0.2555 per pound.	
Seabury & Johnson received for 2,845 pounds in quarter pounds.....	$1,663 10
These would have cost me at $0.390289 per pound.....	1,110 37
Profit.....	$552 73
Which would be a profit of $0.194281 per pound.	
Seabury & Johnson received for 1,006 pounds in $\frac{1}{8}$th pounds.....	$653 06
These would have cost me at $0.42454 per pound....	427 08
Profit.....	$225 98
Which would be a profit of $0.224632 per pound.	
Seabury & Johnson received for 4,482 $\frac{13}{16}$ pounds in $\frac{1}{16}$	$3,044 02
These would have cost me at $0.492013 per pound....	2,205 60
	$838 42

146 Which would be a profit of $0.187031 per pound.

The cost of borated cotton in $\frac{1}{8}$ of a pound is for 130 pounds.....	$42 39
Add general factory expense at $\frac{13}{64}$ per cent.....	5 74
Total.....	$48 13
Add general selling expense at $\frac{14}{66}$ per cent. on above...	7 06
	$55 19

Therefore one pound in $\frac{1}{8}$ths would have cost me altogether per pound $0.42454. This in explanation of the statement which I have above made concerning the cost of $\frac{1}{8}$th pounds as compared with the sum received by Seabury & Johnson for 1,006 pounds.

34 Q. In giving your last answer, did you take the numbers of the pounds sold by Seabury & Johnson and the sums received by them from the sales thereof from statement C, offered in evidence?

A. I did.

35 Q. State whether prior to 1888 and during the years from 1882 to 1887 inclusive, it cost you less or more to manufacture borated cotton than during 1888?

A. It cost me less.

36 Q. Is the last answer which you have given based upon any calculations which you have made concerning such cost?

A. It is.

37 Q. Please state whether or not you regard the charges of 30 per cent. for general factory expense and 50 per cent. for selling expense, contained in statement B, as just and proper items of cost in defendant's business?

A. I do not; it is too high, because in the manufacture of borated cotton no machinery is used, and because all the cost of the machinery, the working of it, the attendance to it, the repairs
147 thereof, the space required for it, the insurance upon it, do not enter as items in the cost of the manufacture of borated cotton. The selling expense is too high, because most orders for borated cotton come in by mail, because the agent's expense who sells some of it is very much less, and because no special offices are required for selling it.

38 Q. State at what prices you sold your borated cotton during the year 1883 and from then on to the present time?

A. In the years 1884, 1885 and 1886 I sold borated cotton in bulk at the average of 80.76 $\frac{3}{16}$ths, in pounds at the average of $1.005, half pounds at the average of 92½ cents, quarter pounds at the average of 85 cents, eighth pounds at the average of 94 cents, $\frac{1}{16}$ths pounds at the average $1.09 $\frac{52}{100}$. With 1885 I had to lower the price of 16ths pounds on account of Seabury & Johnson's competition to $10.80 per gross ounces, and in 1887 I had to further lower the price on my list for borated cotton on account of the same competition from $1.25 per pound in pounds, halves, quarters and eighths, and for ounces from $1.25 per dozen to $1.00. Seabury & Johnson at that time were the only infringers of the patent in suit whose product appeared on the market at that time, and I was acquainted with their prices.

38½ Q. Were you, during the year 1883 up to the present time, able and ready to fill the whole demand for borated cotton?

A. As matter of fact I have been.

39 Q. Did Seabury & Johnson undersell you in the market in this article?

A. They did. They sold borated cotton at prices stated in the catalogues, with a discount of 20 per cent. off.

148 MAY 20TH, 1889.

Cross-examination of Mr. AM ENDE by Mr. MELLISS:

40 X Q. What is your business?

A. Manufacturing chemist at present.

41 X Q. And your factory is at Union Hill, New Jersey, is it not?

A. It is.

42 X Q. From where do you sell your goods?

A. From Union Hill, New Jersey—from the factory.

43 X Q. You have no separate salesroom or store?

A. I have a branch office for the accommodation of my New York city customers, at 1300 Broadway, room 8, 2d floor.

44 X Q. You have had a store for the sale of your goods and other articles in the past, have you not?

A. Up to 1886 I used to keep a drug store in Hoboken, New Jersey, 268 Washington street.

45 X Q. When did you discontinue keeping that store?

A. I had a partner in it from about September, 1885, to May, 1886, and in May or June, I don't know exactly, I sold out to him altogether.

46 X Q. What is that partner's name?

A. H. F. Francke.

47 X Q. Is he still keeping that store?

A. He keeps the store in the same place.

48 X Q. Do you keep books in your business?

A. I do.

49 X Q. What books do you keep?

A. I keep a ledger, and account and account book, and that is about all. We used to have a daily sales book too, and books for the cotton business while I had that store, that is about all.

50 X Q. What business were you in from about January 1st, 1883, up to September, 1886, the date you mentioned?

149 A. Manufacturing and dispensing chemist, essentially the same business.

51 X Q. Did you have the store at Union Hill during all that time, from 1883, up to the time you have mentioned?

A. I had not. I never had a drug store at Union Hill. The store I have talked about is in Hoboken. I had that store in Hoboken since 1868 up to May, 1886.

52 X Q. When did you commence making borated cotton?

A. I have exhibited it at the Centennial Exhibition at Philadelphia in 1876. I think I commenced it in 1875. I cannot say distinctly.

53 X Q. When you first manufactured borated cotton did you purchase the absorbent cotton to be used in making it?

A. I purchased the absorbent cotton in sheets, and I prepared woven-cotton materials myself so that it would take up and hold the boracic acid and glycerine.

54 X Q. When did you cease purchasing the absorbent cotton?

A. I cannot give from memory the exact date, but I imported two lots of absorbent cotton which was not then made here, from Europe. This has not been later than up into 1878.

55 X Q. Can you ascertain the date when you stopped purchasing absorbent cotton?

A. I cannot say distinctly. I had a fire in Hoboken in which many of my books and papers were destroyed on May 19th, 1886.

56 X Q. When was the last lot of absorbent cotton that you bought, purchased?

A. I bought some absorbent cotton, I think, in June, 1886, be-

cause I had considerable orders for absorbent cotton, but I do not think, to the best of my recollection, that we used it for borated cotton, because we had two cases of borated cotton saved from
150 the fire, and I immediately started to making of absorbent cotton on the premises in Union Hill which I had then bought.

57 X Q. Did you purchase any absorbent cotton to use in making borated cotton between the date when you imported cotton from Europe, and the date when you purchased the absorbent cotton referred to in your last answer?

A. I don't think I did.

58 X Q. Have you no way of ascertaining from your books or papers?

A. I have not. We always made the absorbent cotton for antiseptic dressings, and I only purchased occasionally some absorbent cotton when I had very large orders for absorbent cotton. Most of the absorbent cotton I sold as such was made by ourselves.

59 X Q. Do you mean by that that you did not use any purchased absorbent cotton in the borated cotton made by you since July 1st, 1883?

A. I think I never did.

60 X Q. Have you no way of ascertaining whether you did or not?

A. It was against the rules of the business. That is all I can say now.

60½ X Q. What was against the rule of the business, and what rule do you refer to?

A. I could make the absorbent cotton myself cheaper myself than I could buy it, and I made it myself better than I could buy it, and I therefore made the rule not to use any purchased absorbent cotton for antiseptic dressings.

61 X Q. Now, where was your factory and store situated that was burned down in May, 1886?

A. At 268 Washington street, and in the adjoining No. 37, 7th street, Hoboken.

62 X Q. Did you have it insured?

A. I had.

63 X Q. In what company or companies?

A. I don't know now.

64 X Q. For what amount was it insured?

151 A. I don't know exactly, I think it was over $6,000.

64½ X Q. What was the name of your insurance broker, if you had one then?

A. I had two, one man by the name of Wilson, and the other man's name Edward Henry Strother, but Strother left I think about that time. Anyhow, Strother had the other half for most of the time.

65 X Q. Can you ascertain the name of the company that you were insured in at the time of the fire of 1886?

A. I can.

66 X Q. Will you do so, and tell me at the next hearing?

A. With the greatest pleasure.

67 X Q. What books did you keep in your business prior to the fire of 1886?

A. I had a ledger and an account book for the sales of antiseptic dressings, day books and so on.

68 X Q. What books were destroyed in the fire?

A. Some of the sales books of cottons which I kept on the third floor.

69 X Q. All of the other books you have still, have you?

A. All those that were not destroyed, yes.

70 X Q. Were all of the books of cotton sales destroyed?

A. Up to 1884.

71 X Q. Then you have the books of cotton sales from 1884 to date?

A. I have.

72 X Q. Where were the books that were not destroyed at the time of the fire?

A. There were some in the store-rooms at 268 Washington street, then I had one in my room in No. 37 7th street, Hoboken. The two buildings opened one into the other.

73 X Q. Did you have a partner on May 19th, 1886?

A. I had in the drug business, H. F. Franklin, named before.

152 74 X Q. Did you have a foreman in your factory at that time?

A. I had not.

75 X Q. Did you own the store and factory in Hoboken to which you have referred?

A. I did not own the buildings.

76 X Q. What rent did you pay for them?

A. I paid $100 for 268 Washington street a month, and $35 for No. 37 7th street a month.

77 X Q. Do you own the buildings at Union Hill where you now manufacture?

A. I do.

78 X Q. What is it worth?

A. I bought the whole thing, comprising two brick dwellings, one frame factory, one brick factory and several empty lots, with boiler and engine, for $14,500.

79 X Q. What is it worth, if you know?

A. It is worth about the same. I have made lots of improvements on it. I put fences around the whole, and the empty lots I have filled with ground and so on—put a new boiler in, &c.

80 X Q. In your direct examination you made a general statement purporting to be made on the same theory, as nearly as possible, as the defendant's statement marked Exhibit B, a copy of which I now show you. From what books or papers did you get the items contained in the statement so made by you?

A. I have calculated the cost of absorbent cotton, I know the prices of glycerine and boracic acid. I know the price of labor and materials for packing, and I have found them on calculation

about correct; boracic acid has mostly been a little lower. I knew that and calculated the price according to my knowledge. I don't keep no special account books for everything I buy.

81 X Q. You wish to be understood, then, as saying that you did not make your statement referred to in my last question from actual transactions in your business?

153 A. I do not wish to be understood that way.

82 X Q. Then tell me from what facts you did make that statement.

A. From the actual experience obtained in buying all these goods myself, supervising the business and repeated occasional calculations of the cost of manufacturing the various articles I make.

84 X Q. Upon what did you base the calculation in reference to borated cotton?

A. Upon the price it cost me to make absorbent cotton and the prices paid for glycerine and boracic acid; upon the wages paid by me for making it and the price paid for packing material. The other facts for drying were taken from the bills which I had paid for coal. I took all the bills and figured them together and separately. I looked out in the book my insurance. The capital invested is given from the price calculated for the building and a lot when I bought it. The repairs mentioned are from a bill. The taxes were taken from the tax bill; the general selling expenses from the check book and from what I know I paid for ferriage, calculated especially for the purpose.

85 X Q. Where did you get the figures on which you made the calculations referred to in your last answer?

A. Some of the items are calculated from the books, as explained above, and some from bills and some from daily expenses which I know.

86 X Q. Will you produce those books and papers at the next hearing?

A. I will produce them at the next session.

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87 X Q. Do you produce the books and papers which you said you would produce in answer to X Q. 86?

—. ——.

88 X Q. What are the names of the books?

A. Ledger or account books, bills.

89 X Q. Which are the ledgers or account books?

A. Both at the same time.

90 X Q. What is this book?

154 A. My accounts from July, 1888, to date.

91 X Q. Is it a ledger?

A. It is printed on the back, ledger.

93 X Q. Point out to me the entries in your books or papers, as stated in question 23, now here, from which you get the figures of $20.84, as the cost of making 100 pounds of borated cotton.

A. I cannot point out in these books or in my other papers, be-

cause I have been making absorbent cotton since 1877; have calculated the price on several occasions, but my old calculation book was destroyed by fire. I remember and know from these calculation that this price for absorbent cotton is correct.

94 X Q. How did you make that calculation?

A. The first was taking the price of ordinary crude cotton, the prices of the various chemicals required and their certain proportions for rendering cotton absorbent, the cost of labor, the cost of the steam for boiling and drying, weighing first the ready absorbent cotton, noting the difference in outcome of pure cotton arising from the removal of the fatty and other substances, calculating the price for carding, noting the difference between carded and uncarded cotton, and thereupon calculating the price for pure absorbent cotton resulting, the cost of transportation and carrying the absorbent cotton to the carding machines and back to the factory-rooms for packing absorbent cotton.

95 X Q. Do you understand that the absorbent cotton that I refer to in my question is absorbent cotton that was made into borated cotton and not sold as absorbent cotton?

A. It refers to absorbent cotton in general, whether for sale as such or for medication with whatever chemical may be required.

96 X Q. If the absorbent cotton to which you refer was to be made into absorbent cotton would it be taken from the carding machine back to the factory-rooms for packing absorbent cotton?

155 A. We use the rooms for packing absorbent cotton for a great many other purposes besides this special one, and one of these other purposes is saturating of absorbent cotton with the chemicals necessary to make borated cotton.

97 X Q. What price of ordinary crude cotton did you take in making that calculation?

A. The above price at that time of 12⅝ cents, while since the last two years I have paid 12½ cents.

98 X Q. Of what period did you take the average price?

A. The period from 1877 till 1886.

99 X Q. Where did you get the prices for ascertaining that average price?

A. They were taken at the time from the bills of the houses from which I bought the cotton. The old bills are lost or burned, the later bills are Messrs. Dunn, Son & Company, 122 Pearl street. Those bills are at home, and they are 12½ cents. I used to buy from Desnay & Company until they went out of business.

100 X Q. Do any of these purchases of crude cotton appear in your books? If they do, point them out.

A. I have not entered these purchases into any book, but simply keep the bill, and I can assert upon my oath that these figures are correct.

101 X Q. What price in making the computation of which we are speaking did you take for the various chemicals required to make the cotton absorbent?

A. I took the cost of soda, 8 cents per pound, and for carbonate of soda, 1½ cents a pound, although at times when the market was

slow I have paid for carbonated soda only 1¼ cents a pound, for chloride of lime 2½ cents per pound.

102 X Q. Do any of the purchases of chemicals which appear in your last answer appear in your bills? If so, point them out.

A. I did not bring the bills concerning the manufacture of absorbent cotton. I keep all bills by themselves on files. I
156 did not bring those bills concerning absorbent cotton because I understood defendant's counsel said he did not want them.

103 X Q. What charge for labor did you take in making the computation referred to—that is, what was the amount in dollars and cents on 100 pounds?

A. It was, as far as I can remember, 75 cents.

104 X Q. Where did you get that item of 75 cents for labor?

A. I had one man who got ten dollars a week and one boy who got three and a half dollars a week. I figured up how much of their time was required in that special work, and that made the item.

105 X Q. How did you figure up the amount of their time was taken for that work?

A. They had to give me on repeated occasions, perhaps three or four times, the amount of time of each required, and then calculated it by the hours.

106 X Q. Give me the name of this man and boy.

A. The man's name was John Montanye, after him Sperry, I don't know his first name. The name of the boy I don't remember any more. They change pretty often.

107 X Q. Are these persons still in your employ?

A. They are not; they are dead.

108 X Q. Did they make their statements as to their time in writing?

A. They gave them to me verbally and I put them down on paper; besides, I have been watching them at work.

109 X Q. Have you the memoranda that you made as to their time?

A. They were entered into a book which was burned.

110 X Q. What charge did you make for the item of steam in this computation that you refer to?

A. I don't know any more; we use steam for a variety of purposes at the same time and each one requires its own calculation.

111 X Q. What charge did you make in that computation for baling and drying?

157 A. We charge for the steam. For drying absorbent cotton in summer we require no steam, but only space. In winter we use steam.

112 X Q. What charge did you make for weighing as stated in your answer to 94 X Q.?

A. Whatever manual labor is required is included in labor.

113 X Q. What charge did you make for the item of carding in that computation?

A. I do not remember any more the exact figure, it is so many years ago.

115 X Q. What charge did you make for transportation and carrying absorbent cotton to the carding machine and back to the factory-room for packing absorbent cotton?

A. Inclusive of the weighing the absorbent cotton which was done in "tared" boxes, 10 cents per hundred pounds.

116 X Q. You have stated in your direct examination in answer to 23 Q., that the defendant's statement that 130 pounds of borated cotton properly cost $27.17. Do you mean by that that is what it cost you?

A. Yes.

117 X Q. How did you arrive at the conclusion that the item of labor, one dollar, is correct in that answer?

A. Because at that time when I computed the price of borated cotton, I took into the calculation the time and labor with its cost in making borated cotton.

118 X Q. How did you arrive at the item of time and labor and the proper charges to be made therefor?

A. In a similar way that I got the item for absorbent cotton?

JUNE 21ST, 1889.

Defendant's counsel asks the master to make an order allowing the book-keeper in the office of defendant's counsel to exam-
158 ine, in the presence of the master, those portions of the books produced on this hearing by the complainant, from which portions of the statement of the cost and expense of making and selling borated cotton by the complainant is made up, which statement appears in the testimony of the complainant in this case.

Counsel for complainant says that he will allow defendant's counsel and the master to examine the books, but submits that no one else is authorized to inspect them.

The master says that the counsel for the defendant may examine the books but that under objection of complainant's counsel, rules, that no one else shall examine them without consent of complainant.

Defendant's counsel excepts to the ruling of the master refusing to allow his book-keeper to examine the books.

Cross-examination of MR. AM ENDE continued:

119 X Q. Mr. Am Ende, please point out in the books which you produce, and read from them so that they may be copied in the record, such entries as you used in making up your statement.

Counsel for complainant asks what statement reference is made to.

Defendant's counsel says the statement contained in complainant's answer to question 28.

A. The first item concerning coal and its consumption is from the bills which I produce here. (Witness produces 21 bills.) The next item is machinist and labor. The machinist gets $10 a

week, which makes in 52 weeks $520 a year. I had the custom of entering into my books the sum total of wages paid up to 1886. I will produce that book at the next session. Since that time I have drawn a check on Saturdays for $60, for wages which I had to pay in case I did not have sufficient cash at hand. Sixty dollars
159 comprises the average amount of wages paid by me every week, of which the machinist received from June, 1886, until the end of January, about $9 a week. After which I had another machinist who received $10 a week, and because $9 a week was paid only for a short time, I calculated the amount of machinist paid $10 right straight through. I can only produce the checks $60 drawn each Saturday when necessary, and I will do so the next time. This is the answer.

Complainant's counsel asks of me to give the next item.

Defendant's counsel requests complainant's counsel not to communicate with the witness while he is being cross-examined.

A. The next item is taken from the two policies of insurance, one for the building, the other for stock; here they are. (Witness produces two insurance policies.)

The next item, "capital invested," is given from the actual value of the building, together with the lot on which the building stands.

The next item, "actual repairs," is taken from the bill of Mr. John Kennedy for repairs of roofing two buildings, of which the shop is the smaller by 250 square feet, and in order to avoid fault finding, I have taken one-half of the total bill as repairs for the roof of the building in which the manufacturing of borated cotton is carried on. There is a difference of 75 cents in favor of the roof of the shop, which did not seem to me sufficient amount for lengthy figuring. (Witness produces the bill above referred to.)

I have one more bill here for coal, which I add to the other bills.

The next item, for consumption of water, is taken from these water bills herewith produced, which show a consumption, the one of 10,000 cubic feet per month; the other the consumption of 14,000 cubic feet for three months. Whereas 130 pounds borated
160 cotton required about $\frac{3}{4}$ of one cubic foot for making it, and whereas the water for saturating borated cotton is obtained from water which is regained by distillation from water used for heating and for manufacturing generally, inclusive of the driving of the engine, the amount of water respectively, its value is such an insignificant sum amounting at the utmost to a penny or two, that amount has been included in the rent.

In former years, 1883 to 1886 and 1887, the heating area was much larger. The cost of these items is a great deal less.

The general expenses of doing business, the workmen's wages who acts as a driver, are $10 a week, which has been included in the $60 usually drawn from the bank on Saturdays. The wagon cost $75. I have the wagon six years, so that the item of $10 charged yearly for the wagon and repairs has almost paid for the wagon when it was new.

Ferriage per year, $75, is calculated from the cost of ferry. To

cross the ferry costs 25 cents. The wagon does not cost on Sundays and holidays, and ocasionally perhaps a dozen times during the year does not go over the ferry at all. As for instance it happens to-day, and, therefore the item of $75 calculated in making up the expense sheet is actually about between one and two dollars higher than the actual cost.

Postage stamps and stationery are $200 a year, are also based upon a very high calculation of stamps, of which I usually buy out of my own pocket $2 worth a week, and the stationery has been calculated at its utmost possibility, and on producing the bills I think it will cut down not less than $40.

Advertising a year is taken from the fact that these last years I have only one advertisement in the American Record for which I pay, and this amounts to $50 a year.

The portion of borated cotton $4\frac{4}{10}$ per cent.; the whole output is also too high.

161 Not to delay the proceedings and consume unnecessary time I will give the exact proportion at the next session.

In calculating the expenses, the amount paid for taxes is taken from the tax bills, which I here produce, which both of them show the valuation of personal property of $200, which has to be deducted from the bills as not entering into the expense of manufacturing, and I point out that of these two bills produced here, the amount calculated is taken from the highest bill, while the other bill is 6 per cent. less, so that I have calculated actually more than the closest calculation would warrant. I hand in these two bills.

That I believe repeats every item asked for in question 28.

I can add to the above that the total percentage of sales of borated cotton for the last years which we have calculated at 4.4 per cent. is a very small fraction below 4.32.

Defendant's counsel moves to strike out all of the answer to question 119, on the ground that it is irresponsive and does not answer the question.

Decision reserved.

120 X Q. Question 119 repeated.

A. Those items for which I have produced the original bills receipted by the parties to whom the bills were due have not otherwise been collected or entered into any books. It is my custom to pay my bills at the end of the month, and I keep the bill as the record.

121 X Q. Do any of the items from which you made up the statement concerned in your answer to question 28, appear in any of your books?

A. No; I have answered already that they appear in these bills. It is my custom of keeping the record of what I have to pay in these bills because it is the simplest way for me to do so, and it answers, as far as my judgment goes, all my purpose.

162 122 X Q. In reply to cross-question 85, you stated some of the items are calculated from the books as stated above. In view of that fact do you still wish to be understood that none of the

items from which you made the figures in that statement are contained in your books?

Objected to as incompetent and already fully answered, also as misstating answer 85.

Decision reserved.

A. The answer to that is contained in the long answer I made to cross-question 119.

123 X Q. Will you produce the check books to which you referred in your examination to-day at the next hearing?

A. Certainly.

124 X Q. In your answer to question 28, as a part of your statement, is this entry: Total sale of borated cotton by Am Ende, between January 1st, 1888, and November 22d, 1888, which item then gives certain amounts in pounds and the figures of expense. Where did you get the data from which you made the total sales of that borated cotton? Was it not from some of the books that you have produced here?

A. They are from the book which I produce here.

125 X Q. Is there any mark or name on that book by which you can identify it?

A. There is a mark on the back of the book, "Ledger," and here are the entries.

126 X Q. Please read the entries from that book which you used in making your statement in answer to question 28, so that they may be copied on the record.

Counsel for the complainant invites the attention of the court to the character of this cross-examination.

A. My answer is——

163 Counsel for defendant moves to strike from the record the invitation of the complainant's counsel, on the ground that it is immaterial and irrelevant.

A. I can read them now, but I have at home a complete extract of all these sales which I can produce. It will cut off about a day's examination if I am allowed to produce that extract, which can be verified as correct or incorrect by defendant's counsel.

Defendant's counsel accepts the offer of the witness, provided the extract, on comparison, be found correct.

Defendant's counsel declines to continue the examination so long as complainant's counsel communicates with the witness while on the cross-examination, and asks the master to warn complainant's counsel not to do so again.

Complainant's counsel replies that no communication respecting anything in the examination has passed between him and the witness, but is aware that the defendant's counsel, in the absence of the master, takes advantage of any innocent remark, such as asking witness for a match to light a cigar with, or such as handing the witness a paper which the latter stooped over to reach for, as a

ground for encumbering this record with unprofessional accusations.

127 X Q. Where did you get the information from which, in your reply to question 28, you put the item of packing cases for borated cotton in bulk at $1.20?

A. This bill of Mr. Airichburg shows as the cost of packing cases 35 cents, while I used to pay 40 cents for the same cases, each of which holds about 50 pounds of borated cotton. The old bills, filed to 1886, May 19, are destroyed, but I know from memory
164 that I used to pay him 40 cents, either of which shows that the packing cases charged at $1.20 would really hold 150 pounds instead of 130 pounds only.

Witness produces a bill which he hands to defendant's counsel, dated June 13, 1889, but it dates back to December 5, 1888, and contains eight sales at different times.

128 X Q. Where did you get the information from which you got the item in your answer to question 28 of labels of borated cotton in bulk 50 cents?

A. I have not brought that bill along. I will bring it along on Monday.

129 X Q. How many labels are used in putting up in bulk the amount of borated cotton which you had under consideration in your calculation of your own manufacture in your answer to question 28?

A. 130 labels for 130 pounds.

130 X Q. Please give me the same information asked for in the last two questions, that is, where you got the cost for labels and cases referred to in your answer to question 28 in regard to borated cotton when put up in pounds?

A. From the same bills and from my knowledge of the quantity of borated cotton which cases would contain, whether borated cotton was shipped in bulk or packed in boxes. The amount given by me is a very fair average, because it does not need fully four boxes to pack up 130 pounds if packed in one pounds or smaller packages.

131 X Q. Where did you get the data from which you made up the item in your answer to question 28 under pounds of cartons, $3.90?

A. Borated cotton in pounds, half pounds, quarter pounds, and $\frac{1}{16}$ pounds, sometimes sold wrapped in paper which costs very much less, and sometimes in boxes which cost a little higher, and. I consider the item a fair average from my experience.

132 X Q. So that in making your computation in your
165 answer to question 28, you took the price of cartons that we put on them because you thought it was reasonable, did you not?

A. I did after figuring.

133 X Q. From whom did you buy your cartons within the last few years?

A. The firm is changed recently. I will bring the name of the firm and the bills next time.

134 X Q. You have bought a great many cartons, have you not, in your business?

A. I have.

135 X Q. Have you bought them all from one firm?

A. I bought them from two firms.

136 X Q. Cannot you give the names of either of these parties now?

A. I will give them the next time.

137 X Q. Cannot you give the name of the old firm whose name is changed now?

A. I cannot just now think of the name.

138 X Q. Throughout your calculation in your answer to question 28, have you given the item of the cost of cartons for half, quarter, eight- and sixteenth pounds in the same manner that you have testified you made up the item of $3.90 for cartons under the head of pounds in the answer?

A. I did not.

139 X Q. Please state how you made up the item for half, quarter, eighth and sixteenth pounds in that answer.

A. As regards half pounds and quarter pounds as given in the answer already in answer to question 131. For halves and quarters the calculation was made the same as in pounds.

As to $\frac{1}{16}$s they are sold sometimes too in papers, but as their sale in paper is very small, I have calculated cartons all through. In the $\frac{1}{16}$ I get the cartons printed and I have given the amount from the bill. The firm's name is Osborn, in Newark, New Jersey.

166 140 X Q. Can you give me now the name of the insurance company in which you were insured at the time of the fire?

A. One was the Continental of New York, and the other the Hamburg, Bremen. They paid their policies after the fire and kept them of course. The present insurance papers are here.

141 X Q. What rent did you pay for your office at 1300 Broadway, when you had it?

A. When I had it it was $25 a month. It was not a regular office, as I conduct my business from Union Hill, New Jersey, and as I receive or direct all my letters to Union Hill, I have always considered it an office for the accommodation of my New York customers only.

142 X Q. Tell me how you arrive at the conclusion that borated cotton comprised $4\frac{4}{10}$ of your business which you had under consideration in your answer to question 28.

A. I conduct since July 1st, 1886, in manufacturing business of antiseptic dressings and allied materials as appearing in the books before me. I have taken from the same books the amount of material sold respectively produced, and of these borated cotton formed $4\frac{4}{10}$; actually it is 43190 per cent. from July, 1886, to November 22d, 1888. Before July, 1886, I used to conduct a general drug business and also manufacturer of mineral waters, and during the time the amount of borated cotton sold was very much smaller proportion of my business.

JUNE 24TH, 1889.

144 X Q. Have you brought with you the statement which you have testified you made from your book at the last hearing?

A. Yes, sir; I have.

Witness produces a statement covering the period from January 1st, 1888, to November 22nd.

145 X Q. What does the first entry on that statement of 57 3, 3.00 mean?.

167 A. It means 3 dozen borated cotton sold in ounces to Mr. Hille, of Union Hill, 83.

146 X Q. What book is that entry taken from?

A. From the book printed on the back "Ledger" it begins—contains the factory account from January 1st, 1887, to August 1st, 1888, besides a few small accounts which don't concern this business. They were drug-store accounts.

147 X Q. Is this statement made up in the same way throughout from entries in this book?

A. It is not. It is also made up from the statements of the account book which covers the period from August, 1888, till August, 1889.

148 X Q. In each instance in this statement you have given in the first column the page of the book from which the entry on that line is taken, have you not?

A. Yes.

149 X Q. The entries commencing the first one, page 57, and ending with the entry marked page 514, are taken from which book?

A. From the first mentioned of these two, and the other entries from 22 to page 290, are taken from the second-mentioned book.

150 X Q. In each instance the entries on this statement give the quantity, description referring to size of package and price received for the borated cotton to which such entry refers, does it not?

A. It does.

151 X Q. Is it not a fact that the entry to which your statement refers in page 158 in the first book which you have produced marked ledger, is wrong in this statement, that the entry in the statement is one dozen, 90 cents, and in the book, one dozen 81?

A. It is wrong as far as the book is concerned. I told the lady in the house that the man who used to be a clerk with me would pay it, he should get 10 per cent. discount.

152 X Q. To what man do you refer?

A. To August Bode, of Union Hill, druggist, Bergenline avenue.

168 153 X Q. Who is the lady in the house to whom you refer in your answer to cross-question 151?

A. Mrs. Schumacher; she is clerk for me.

154 X Q. Does the entry under the heading of page 169, on the statement which you have just added in pencil, agree with the entry of page 169, in the first-mentioned book?

A. It don't agree. The entry should be pounds at $1.80.

155 X Q. What do the figures on your statement on a line with page 158 or 169 on that statement under the subivision of $\frac{1}{16}$ pounds mean, and where are they taken from? The figures I refer to are 2—200.

A. It had got mixed up with folio 153, 90 cents for one pound. It refers to page 158, Bode's account. This clears up the misunderstanding in the first question.

156 X Q. On your statement produced here to-day, on the line commencing 268, meaning the page of the first book, is the item under pounds of 2, meaning 2 pounds borated cotton, and the figures 149, meaning the price paid therefor. I cannot find any such entry on page 268 of that book. Please explain where and how you got this entry on your statement.

A. It was an error, it should be 2 pounds in half pounds, added together from the sales of April 25 and of June 1st, appearing on pages 268 and 269, continuous account and should be for $1.51 instead of $1.49. The figures were dictated to me and I figured them in my head.

157 X Q. On the same line of your statement I find the next entry $\frac{3}{4}$, meaning $\frac{3}{4}$ of a pound; and 56, meaning 56 cents, the price received therefor, under the column headed half pounds, but cannot find this entry on page 268. Please explain this.

A. It should be one-half pound, 38 cents, in quarters.

158 X Q. On the line, page 414, on your statement I find
169 the entry under half pounds 5, meaning five pounds of borated cotton in half-pound packages, and the figures 375 meaning the price received therefor, but I do not find entries in the account in the first book produced here to-day to which this item refers, that will give that result. Please explain this difference.

A. The account extending over 4 pages, from 412 to 415 inclusive, it seems that one item of one-quarter dozen one-half pounds has been overlooked. The actual account is 6½ pounds, $4.88. Also in the same line in the statement under quarter pounds, 5½ pounds should read 6½ pounds at $4.88, instead of $4.13. All the items having been marked in the book.

159 X Q. Does the item on the statement on the line page 458, under quarters, of one-quarter pound, 20 cents which appears in the book to be in the book under date of December 28, 1887, belong in this statement?

A. It does not.

160 X Q. On the line page 478 of the statement, appears under half pounds the item 3 pounds $2.44. There seems to be a difference between this and the book, will you please explain it?

A. It was originally that amount, one item had been overcharged 19 cents by the clerk who did not know the discount this customer receives, and these 19 cents have later been deducted in the regular monthly statement as noted in the book.

161 X Q. Was this deduction of 19 cents noted in the first book which you produced here to-day on page 479 before you made up the statement of extracts from your books which you have produced here to-day?

A. It was, and standing further down, and I had not noticed it, because it was not specially marked.

162 X Q. Under line page 484 on the statement, I find the item under bulk of 7 pounds 85.25, and in the book on page 485, being a continuation of the account commencing on page 484, the entry June 5th and 6th, 2 pounds borated cotton in one-pound
170 packages and 5 pounds borated cotton in pounds, which item on your statement you have to-day transferred by taking the entry 7 pounds 85.25, from the column under bulk, by putting it under the column pounds in that statement. Please explain how you put in column under bulk, and why you wished to transfer it to column under pounds?

A. The fact of the matter is that this item has been sold to that house and was delivered in packages and I had a dispute with my clerk whether these 7 pounds 85.25, should be charged under bulk or under pounds. The result in charge and calculation being actually absolutely equal and it occurred to me that because it was marked with the sign pounds it might more properly be enumerated under that heading.

163 X Q. How do you indicate in your books a sale of borated cotton in bulk?

A. Usually by the word package, and the word package stands in this case behind the 2 pounds, and is only marked with the sign of a dot behind the 5 pounds following immediately in the column behind the 2 pounds.

164 X Q. How do you indicate in your books the sale of borated cotton in pounds?

A. By the sign of pounds.

165 X Q. Is it not a fact that you could not tell by looking at the entries of 2 and 5 pounds borated cotton on June 5th and 6th respectively on page 485 above referred to, whether the cotton there mentioned was sold in bulk or in pounds?

A. I can tell from the book here that these seven pounds have been delivered as seven packages of one pound each.

166 X Q. Please tell me how you can tell that from the entry in the book?

A. In answer I beg to hand to you for copy these two items, page 485:

"E. B. 5 2 lbs. box cott. 1 lb. packg. $1 50
65 lbs. " " lb. " ..... 3 75"

171 167 X Q. Then when you entered this item under bulk in your statement it was a mistake, was it not?

A. No, it was not.

168 X Q. Does not bulk mean sold in bulk and not in pounds?

A. I refer defendant's counsel to his calculation for 130 pounds in pounds sold, calculated for one-pound packages. It is a common custom to deliver bulk divided off in smaller parcels, one pound or more, to suit the convenience of the customer, and sell it and calculate it as bulk, and every one handling analogous mate-

rial, for instance, plain absorbent cotton, is well aware of this fact. It is a common trade custom.

169 X Q. Why do you, in your books and in your statement which you produced here to-day, distinguish sales in bulk and in pounds, if there is no difference in them?

A. Bulk is sold generally to large customers, who do not care to go to the expense of the more elaborate packing up for trade purpose.

170 X Q. In which column on the statement which you produced here to-day should the entry of seven pounds, $5.25, just referred to, be placed, under bulk or pounds?

A. As I now have placed it under pounds I prefer to leave it there.

171 X Q. Question repeated.

A. I have answered that question already.

172 X Q. Cannot you state, without regard to your preference, under which column it should be entered?

A. It is absolutely immaterial, as I have stated at the beginning of this cross-question.

173 X Q. Then why do you make two columns, one of bulk and the other of pounds, in your statement?

A. That question has been answered already, too.

174 X Q. Question repeated.

172 A. Bulk, as a rule, comprises goods packed up cheaper. As a rule pounds are packed up more expensive, but in this particular item it does not appear distinctly, and also it is immaterial whether these 7 pounds are charged as bulk or pounds, because they have been charged for at the regular price to the same firm as if they had been packed up more elaborate.

175 X Q. Then when you put this item in your statement under bulk you did it on the supposition that they were packed in the more inexpensive way, did you not, and now that you find that they are packed in a more expensive way you put them under pounds. Isn't that it?

A. No; it is not.

176 X Q. Why did you change this entry from bulk to pounds to-day, if it makes no difference?

A. It doesn't make no difference. I had no special reason for it.

177 X Q. Please explain the difference, if there is any, between the entry in the 2d book and in the statement produced here to-day on line — page 103 of the statement?

A. Two packages figured as quarters have to go into the column of one pound. It should read 5 pounds $3.75, and 3 pounds $2.25, under half pounds.

178 X Q. The entry on the statement opposite page 142 in the 2d book produced here to-day seems from the book to be dated January 12, 1889; should not the item on that line be taken out of the statement?

A. The two items on that line.

179 X Q. What is the name of the woman that makes borated cotton for you, to whom you referred in your answer to question 4?

A. At that time a woman named Dind; she is not in my employ-

ment now. She got married and moved away. She had been in my employment for two years.

173 180 X Q. What is the name of the woman who taught her to make borated cotton referred to in your answer to question 6?

A. Mrs. Schumacher; she has been with me ten or twelve years, and she is now a clerk in my employ.

181 X Q. In your answer to question 12, in describing the operations necessary to make borated cotton in your establishment, you state, "We make a solution of boracic acid with water, add glycerine to it, filter the solution," &c. In what proportion do you use boracic acid and glycerine in that solution?

A. One pound of acid, one of glycerine, three gallons of water.

182 X Q. In making borated cotton in your factory do you card the cotton after it leaves the drying mill?

A. It cannot be done. It is impossible.

183 X Q. In answer to question 13, you have stated in substance that in making borated cotton in your factory the work is all done by hand, that no machinery is used, please describe the process by which you make it?

Objected to as already answered in answer 12, to which answer 13 distinctly relates

A. The cotton gets saturated with the solution in the proper proportion, and then treated as previously described. When the cotton is properly saturated, it is spread out for drying. During this spring we have sometimes passed the cotton through a wringer, but it does not give very good results. I did this in an experimental way.

184 X Q. Did you ever take a trial balance from your books?

A. I have not recently, but simply had that *be* done by the lady who attends in the New York office for her office.

185 X Q. Does that part of the business she attends to in the New York office relate to borated cotton?

174 A. Not especially.

186 X Q. Does not the business in the New York office consist in part of transactions in borated cotton?

A. I don't have that office any more; I sold it out. I stated that already.

187 X Q. Did it not at the time that you had it?

A. The lady has sold it if anybody called for it; she did sell it when anybody called for it.

188 X Q. Did she ever sell any of it to your knowledge and enter the sale in the books kept in the New York office?

A. She did.

189 X Q. Did you keep a separate set of books in the New York office?

A. The lady kept them.

190 X Q. What is her name?

A. Mrs. J. Stack.

191 X Q. Is she the Mary Stack that appeared as a witness in this case for you? What is her address now?

A. She is not the same. Her address is 1300 Broadway, I think.

192 X Q. Is she in your employ now?

A. No; that is, she keeps that office on her own account; you will find her name on the door there.

193 X Q. What books did Mrs. Stack keep for you during the time that she had charge of the office in New York, when you had it?

A. This is one of the books and here is another. One is the account book, the other is the cash book. Here is another cash book, and here is one more account book. She has got another account book yet for the last few months of 1888, which I have not here.

194 X Q. Do not these account books which you have produced simply contain entries of goods sold and the prices paid or to be paid for them, and the dates and names of the purchasers?

A. Yes, of course, that is what the account book is for.

175 195 X Q. And these cash books which you produced contain simply entries of the amounts of cash or check received or paid out, do they not?

A. They do.

196 X Q. And these are the books from which Mrs. Stack made the trial balance to which you referred; are they?

A. They are.

197 X Q. Have you within two years taken a trial balance from the general books of your business which you kept at Union Hill, and which you produced here?

A. I have not.

198 X Q. On the statement which you produced here to-day, line —, page 22, referring to the 2d book of account, produced here to-day, is the entry under pounds 5 pounds 82.75, which does not seem to be in that book. Please explain it?

A. It must have got on there by mistake, and no such sale has been made.

199 X Q. Is there not always more or less waste in labels?

A. There is very insignificant. It may be perhaps one or two per mill per thousand.

200 X Q. Do you of your own knowledge know anything at all about the defendant's process or method of manufacturing borated cotton in its factory?

A. I have learned all I know from the minute description made by their chemist.

201 X Q. What period of time do the books of the New York office cover that you brought here to-day?

A. I see here the date of 1885 and 1886, 1887, 1888.

202 X Q. Did you keep these books that you have produced from the Union Hill factory yourself, or were they kept by a bookkeeper?

A. Partly by me and partly by the clerk.

176 203 X Q. Were the entries of sales at the New York store copied in the Union Hill books or included in them?

A. No, it was not.

204 X Q. A portion of the entries in the New York office books were made during the period covered by the statement incorporated in your answer to question 28, were they not?

A. Yes.

JUNE 25TH, 1889.

205 X Q. Do you keep a separate account in your book for advertising?

A. No, sir.

206 X Q. Did you not advertise more extensively prior to the year commencing January 1st, 1888, than you did during that year?

A. I did not in 1886 and 1887, and, I think, what other advertisements I had were all discontinued in the year 1885. I then kept a drug store and manufactured mineral waters which I had to discontinue, and I had to alter my plans in business.

207 X Q. How do you compute the general factory expenses of 13.54 per cent., which you have given in your statement in answer to question 28?

A. It has been itemized in that answer. I have given the general expense of doing business and taken the proportion of borated cotton to my whole business, which was 4.4 and have calculated the itemized amount of expense devolving upon borated cotton, which I found on 702½ pounds to be $196.93, to which I added the 4.4 per cent. of the general expense amounting to $26.66, and this last sum is 13.54 per cent. of $196.93.

208 X Q. How do you compute the selling expense of 14.66 per cent. which you have given in your statement in your answer to question 28?

A. I have given the general expense of doing business and found that borated cotton at 4.4 per cent. of the total output of the factory charged upon the selling expense of $745 was equal to $32.78,
177 which is 14.66 per cent. of $223.59, which represents the factory and itemized cost of production.

209 X Q. Have you brought to-day the bills referred to in cross-question 102?

A. Yes (and witness hands the bills to defendant's counsel).

210 X Q. Have you brought with you the book referred to in your answer to cross-question 119, containing the sum total of wages paid up to 1886?

A. Yes (witness produces the book).

211 X Q. Who is the employee mentioned in this book on page 94 as John, to whom $10 a week was paid?

A. He was the foreman who had charge of the different kinds of manufacture carried on in the basement of 268 Washington street, Hoboken, New Jersey.

212 X Q. Do any entries of wages which are included in your statement in your answer to question 28 appear in this book?

A. It does not. It refers to an earlier period.

213 X Q. Have you brought with you the checks for $60, paid by a week Saturdays after January 1st, 1886, for wages?

A. I brought the check books which were demanded, and witness produces them.

214 X Q. Have you produced any bills for stationery and labels and cartons, referred to in answer to cross-question 119?

A. Yes (witness produces sundry bills).

Defendant's counsel asks the master to mark the statement produced by the complainant on cross-examination, and the same is marked Comp't's Statement, June 25, 1889, J. A. S., master.

Objected to on the ground that the statement by the testimony appears not to be absolutely correct. It should be corrected
178 before being offered in such manner that the corrections appear on the face of the statement.

As the master is not present this objection is reserved till the hearing.

Defendant's counsel states that he is willing that the corrections should be made in the statement above referred to, provided they are made in different colored ink, so that an inspection of the statement will show its condition when presented by the complainant.

Redirect by A. v. BRIESEN, Esq.:

215 Re-D. Q. Are you able to state the sum total of your business during the period covered by your answer 28?

A. I am. From January 1st, 1888, to November 22d, 1888, the total sales amount to $10,498.74.

216 Re-D. Q. Can you tell me how large your sales were during that time of borated cotton?

A. $572.05; this is the amount I found brought out on cross-examination.

217 Re-D. Q. What were your total sales in 1887 and 1888?

A. $22,748.53.

218 Re-D. Q. And during that time how much borated cotton did you sell?

A. In 1887, $419.56. In 1888 to November 22d, $572.05, and in November, 1888, after November, 22d, $56.52, making in all $1,048.13.

219 Re-D. Q. How much borated cotton did you sell in your New York store in 1887, and how much in 1888?

A. In 1887, $42.14, and in 1888, $42.84.

220 Re-D. Q. In giving the total sales of your business in answer to question 216, did you include or not sales in your New York store?

A. They are not included.

221 Re-D. Q. Are you prepared to state the total amount of your sales in New York store for 1887 and 1888?

179 A. I am. They were for 1887, $1,484.21; for 1888, $1,975.10.

222 Re-D. Q. This shows your total sales to have amounted in those two years to $26,207.84, while your total sales of borated cotton during that period were $1,133.11. Is that not so?

A. It is.

223 Re-D. Q. This shows your borated cotton business to have been less than 1.04 of your sales?

A. It was for 1887, 2.84 per cent.; and in 1888, 2.17 per cent. in the New York store, and for the entire business it was 4.03 per cent.

224 Re-D. Q. The witness William G. Crissey, the defendant's superintendent, on the 3rd of April, 1889, in answer to the first question, testifies as follows:

Counsel here reads said question and answer.

Is it or not true that for 100 pounds of borated cotton such a large proportion of expensive help is necessary as there stated?

A. In my experience, extending through a period of thirteen years, during which I have never paid to any help employed in factory so high wages. This expensive help is unnecessary. I have paid for perfectly satisfactory and competent help $1 a day, and such help would be able to produce without any overexertion two fifty to three hundred pounds a day, and whenever it was necessary to work hard a larger amount.

225 Re-D. Q. In adding the chemicals, carbonate of soda, soda and chloride of lime, to cotton as given in your answer one hundred and one, what proportions of those substances do you use and how do they affect the weight of the cotton saturated or treated?

A. I use for one hundred pounds of crude cotton forty pounds of carbonate of soda, five pounds of caustic soda, eight pounds of chloride of lime. This produced in former years about ninety pounds of absorbent cotton, but not ninety-four pounds.

180 226 Re-D. Q. Please give the same answer as to borating the cotton?

A. One hundred pounds absorbent cotton with fifteen pounds of glycerine, fifteen pounds of boracic acid, yield one hundred and thirty pounds of borated cotton. The water used is evaporated.

227 Re-D. Q. Are you able to state to-day what you pay for steam and heating in the computation of expenses heretofore given by you?

A. The steam as the heating used in making borated cotton is computed by the price of coal in my answer 38.

228 Re-D. Q. What were the total expenses to you per annum of your New York office?

A. Approximately $850, being $25 a month for rent and $10 a week for the attendant, and then Mrs. Stack had some expenses for sending out goods, &c.

229 Re-D. Q. Mr. Am Ende, how many ounces go to a pound in this calculation?

A. 16 ounces to the pound.

230 Re-D. Q. I call your attention to your answer to direct question 38, which I do not understand. Please answer that question again, so that the court may see to what extent, if any, you lowered your prices from time to time owing to defendant's competition?

A. In the years 1884, 1885 and 1886 I sold borated cotton in bulk at the average of $1.076\frac{3}{10}$ cents. In pounds at the average of

1.00\frac{5}{6}$. In half pounds at the average of 92$\frac{1}{2}$ cents. In quarter pounds at the average of 85 cents. In one-eighth pounds at the average of 94 cents. In sixteenths of pounds at the average of 1.09\frac{5}{16}$ per dozen ounces, which is equal to the price of 1.46\frac{4}{16}$ per pound in ounces, and in 1887 I had to further lower the price on my list for borated cotton on account of the same competition from $1.25 list price per pound, in pounds, halves, quarters and eighths, to $1, and for ounces from $1.25 per dozen ounces
181 list price, to $1 list price, which is equal to 1.33\frac{1}{3}$ per pound packed in ounces.

231 Re-D. Q. Please tell the court at what price you actually sold borated cotton immediately before, and at what price immediately after you lowered your prices in 1887, as just stated, under pressure by defendant's competition?

JULY 1ST, 1889.

A. It appears from the tabulated extracts from my books which I here present that the prices obtained for borated cotton fell from—for 1 lbs. in 1886, at average price of 97.4 of one cent. to in 1888, the average of 76.6.

For half pounds in 1886 at the average of 89.1, to in 1888 the average of 76.7.

For quarter pounds in 1886, at the average of 84.6 to in 1888 the average of 75.7.

For one-sixteenth pounds in 1886, at the average of 1.19$\frac{3}{16}$ a pound to in 1888 the average of 1.03$\frac{5}{16}$ a pound.

It further appears from the record of 1887, first sheet, marked line 184, that for 9 dozens 10 ounces, before the lowering there were obtained $10.11 while after the lowering 9 dozen brought only $9. This was from a retail customer.

It appears on the same page, on the line giving the account of pages 216 and 217 of the ledger, that before the lowering there were obtained from a jobbing house for 12 dozens $10.80, which is at the average of 90 cents a dozen, and after the lowering, from the same house, for 25 dozen sold to them later $18.75, which is at the average of 75 cents a dozen.

These instances have been picked out of the whole and could be multiplied. The tabulated statement containing the figures of *of* 1886 and 1888 shows a general decline for one pounds, half pounds and quarter pounds, and also has taken place a general decline in the prices obtained for $\frac{1}{16}$.

182 JULY 5TH, 1889.

232 Re-X Q. Where did you get the data from which in answer to redirect question 217, you gave the total amount of your sales for the years 1887 and 1888?

A. From the books exhibited here marked ledger for 1887 and 1888.

233 Re-X Q. Where did you get the data from which in your answer to redirect question 221 you gave the total amount of your sales in your New York store for 1887 and 1888?

A. From the books kept in the store exhibited here the sales book for the years 1887 and 1888, both being in one book.

234 Re-X Q. Is Mrs. Schumacher a relation or connection by marriage of yours?

A. She is not.

235 Re-X Q. Does she live in your house?

A. She does not.

236 Re-X Q. What is the name of the clerk to whom you refer in your answer to cross-question 202?

A. Mrs. Schumacher. Her address is care of me.

237 Re-X Q. To what other advertisements discontinued in 1885 did you refer in answer to cross-question 206?

A. I used to have an advertisement in the "American Druggist." I think it is the "American Druggist," edited by Doctor Rice, and I don't know how much I paid for it. The American Druggist is a paper published in New York, and then I used to have an advertisement in a journal edited by the Post Graduate School of New York, 224 West 23d street, which I ordered to discontinue, but which I have seen inserted occasionally, although I have protested against this continuous insertion, and have never paid for it. The protest has been made on frequent occasions. Then afterwards I
183 had another one in Doctor Hoffman's Journal Pharmaceutical Runschau, which has been discontinued too. That I believe is all as far as I can remember which concern antiseptic dressings. I have other goods-preserving substances which I used to advertise, but they don't concern this.

237½ Re-X Q. Tell me where I can see one of those other advertisements which you say do not concern antiseptic dressings?

A. There was one in the Rural New Yorker, published in New York. I think I stopped it in 1880. It may have been between 1880 and 1885. I used to have one also in the paper published by the Orange Judd Company, but that has been discontinued quite long ago.

238 Re-X Q. What were the duties of the foreman referred to in your answer to cross-question 211?

A. He was my foreman and had charge of the basement, and everything that was carried on in the basement with the exception of the making of tinctures and allied preparations pertaining to the retail drug business. Borated cotton was made upstairs.

239 Re-X Q. Was not the borated cotton shipped through or packed in the basement?

A. It was packed on the second or third floor, and the boxes were carried out of the house through the hall of the first floor, which was one story above the basement.

240 Re-X Q. What is the surname of the foreman referred to in your answer to cross-question 211?

A. John Montanye, who is no more in my employ.

241 Re-X Q. At what time did you discontinue having a foreman in your business?

A. I had no foreman after Montanye left in 1886. I attended to that part of the business personally.

242 Re-X Q. Now, in the computation made by you in your answer to question 28, in figuring the cost of labor, at what amount did you put in the value of your services?

184 A. In my answer to question 25, I stated labor at $1, and this is so high a figure that I could well afford to supervise the making of borated cotton out of the profits of the whole business.

243 Re-X Q. What were the expenses referred to in your answer to redirect question 228?

A. There has been a gas bill for winter months, which as far as I can remember amounted to 32 cents, and the other $30, not accounted for included this and the item stated in my answer to question 228.

CHAS. G. AM ENDE.

Sworn before me—

JOHN A. SHIELDS, *Master, &c.*

Defendant's counsel, before the witness signs his testimony, states that he does not close his cross-examination of this witness, until the objections before the master are argued, and before the objections on which decision is now reserved are decided, as was understood before the master at the hearing of this case on June 21, 1889, provided he wishes to argue those objections on the adjourned day, the master not being present.

Counsel for complainant states, that on the record of the proceedings of June 21st, it appears that decision but on one objection was reserved, which is on defendant's motion to strike out answer 119.

Counsel for complainant states that he does not care for answer 119, on the record, and is willing that it be stricken out, and asks whether defendant's counsel has any more questions to propound to the witness, who is present and ready to testify.

Defendant's counsel states that he has already his position above, and has nothing further to say.

185 Redirect by A. v. BRIESEN, Esq.:

244 Re-D. Q. It is now 12 o'clock noon; are you ready to stay here this afternoon and answer any further questions which defendant's counsel may propound to you?

Defendant's counsel objects to any question being put to the witness on the redirect, on the ground that the cross-examination is not yet closed, and to the above question specifically on the ground that it is immaterial and irrelevant.

A. I am.

245 Re-D. Q. Then please, as defendant's counsel puts no question to you, sign your deposition.

Defendant's counsel objects on the ground that the cross-examination is not closed as stated in the last objection, and objects to the witness signing for the purpose of closing his examination.

The witness here signs his deposition under objection of defendant's counsel.

CHAS. G. AM ENDE.

Sworn before me—

JOHN A. SHIELDS, *Master, &c.*

OCTOBER 7, 1889.

Mr. GEORGE W. HOPPING, a witness produced on the part of the defendant being duly sworn, testifies as follows:

1 Q. Please state your name, age, residence, and occupation.

A. George W. Hopping; age, 41 years; I reside in Bloomfield, New Jersey. I am an accountant and cashier for Seabury & Johnson.

2 Q. You have testified in this case before, have you not, as a witness for the complainant?

186 A. I have.

3 Q. And you assisted in preparing the statement marked B, produced by the defendant on this accounting, did you not?

A. Yes.

4 Q. In that statement under the heading of pounds on the 2d page thereof, there is no charge made for the item of labor in preparing pounds of borated cotton. Please explain this if you can.

A. It was an omission in copying—rather in calculating.

5 Q. Is it not a fact that in computing the cost of borated cotton in pounds in statement B, the cost of labor is left out in stating the total expense of that item?

A. Yes.

6 Q. Please make the calculation and state how that part of the statement should read if correct.

A. 130 pounds of borated cotton	$30 33
130 cartons at $30	3 90
Labor	1 30
Labels at $3.50 per 1,000	45
2 packing cases at 88 cents	1 76
	$37 74
Equals $29.03 per pound	29 03
Add proportion of expenses as above 30 per cent	8 709
	$37 739
50 per cent	18 869
	$56 608

That is the only mistake in that part of the statement, and the addition in the item of labor is the only cause of the difference of calculation.

8 Q. In this statement it appears that a charge of 59 per cent. is made for the expense of selling borated cotton. Is that charge correctly stated at that figure?

187 A. That is a correct average cost of selling all goods manufactured by the defendant, including borated cotton.

9 Q. Is 50 per cent. the proper percentage to be charged for the expense of selling borated cotton by the defendant?

A. No.

10 Q. Why is it not?

A. Because the proportion of the expenses chargeable to Benson's plaster is larger than that chargeable to the rest of the goods manufactured by the defendant.

11 Q. Of what items is the 50 per cent. made up?

A. Store expenses, including travellers; pay-roll, advertising, loss on furniture, interest on accounts receivable and stock on hand figured at cost.

12 Q. Are all of those items charged in that statement, the expense of selling borated cotton and goods of a like character manufactured by defendants?

A. They are.

13 Q. Should they as a matter of fact be so charged?

A. No, the cost of advertising Benson's and an uncertain proportion of other advertising should not be charged to the expense of selling general merchandise, and the whole of the travelers' expenses should be charged to general merchandise.

14 Q. Explain, please, stating the figures, the correct charge that should be made against borated cotton for its proportion of the selling expenses of the defendant.

A. The average amount spent in advertising Benson's plasters for 1886, 1887 and '8, including all of what we call general advertising, a variable proportion of which is for Benson's plasters, is $36,555. The average for the same year expended for travellers is $32,314. These two items amount to $68,869. This amount deducted from $132,473, the average store cost figured, as already stated, for the same period, means $63,604 general expenses

188 of selling goods of which Benson's plasters bear a proportionate part. I find that the sale of Benson's plasters for the period named, average as near as may be 30 per cent. of the total sales. I therefore for convenience taking 30 per cent. of the amount stated above $63,604, amounting to $19,081, and added thereto the amount of advertising Benson's plasters including general advertising, namely, $36,555, making $55,636, thus eliminating substantially Benson's expenses from the general, leaving as chargeable to all other merchandise except Benson's $76,837, thus showing that the proportion of expense of Benson's represented by the 50 per cent. is as $55,636 is to $132,473.

The cost including labor directly expended in the manufacture of Benson's plasters exclusive of general expenses of the factory is $3.12 per gross. 30 per cent. general expense of factory as per statement B amounts to 93.6 cents which added to the $3.12 makes $4.056 cents, the cost per gross of Benson's plasters delivered at our store. The average sale of Benson's for the period mentioned is 7,990 gross per year, which at our selling price of $21 per gross would amount to $167,790. 90 per cent. of our sales are to whole-

salers at 20 per cent. discount, the remainder to retailers at list prices. This would give us net results of the sales $137,588. The same number of gross 7,990 would cost at the store, at $4⅝ a gross amounts to $32,407, which added to the expenses of Benson as stated above, makes the cost to the defendant $88,043, making an average profit for the year of $49,545, which is about 81 per cent. of the total profits. The expenses of all other merchandise is $76,837, and the profit thereon about 19 per cent. of the total profit. That is the general merchandise cost to sell about 58 per cent. of the 50 mentioned in our calculations on statement B, at a net profit of 19 per cent. of the total profits. While Benson's cost to sell about 42 per cent. of the 50 mentioned in statement B, with a net profit of about 81 per cent. of the total profit.

189 15 Q. In this calculation was anything allowed for the services of president of the defendant in the item of general store expenses?

A. No.

16 Q. So that making proper allowance for his services would necessarily increase the expenses of selling borated cotton by the proportionate amount of such allowance. Would it not?

A. Yes.

OCTOBER 9TH, 1889.

17 Q. Have you calculated the difference it will make, if any, in the item of net profits, if any, made by the defendant in manufacturing borated cotton between July 1st, 1883, and November 22d, 1888, as shown in statement C, produced pursuant to master's order of January 10th, 1889. If you correct the error of leaving out the item of "labor $1.30" on borated cotton put up in pounds, as shown in statement B, produced pursuant to the master's order of January 10th, 1889?

A. Yes.

18 Q. Please state the result of that calculation.

A. It will add $ 05.35 to the cost of producing the number of pounds mentioned in statement C.

19 Q. Have you calculated the difference it will make, if any, in the item of net profits, if any, made by the defendant in manufacturing borated cotton between July 1st, 1883, and November 22d, 1888, as shown in statement C, just mentioned. If you make a proportionate allowance for the services of the president of the defendant assuming such services to be worth $15,000 a year?

A. I have.

20 Q. Please state the result of that calculation.

A. It would add $358.82 to the cost of borated cotton as mentioned in statement C.

21 Q. Have you calculated the difference it will make in the item of net profits, if any, made by the defendant in manufacturing borated cotton between July 1st, 1883, and November 22d,

190 1888, as shown in said statement C, if you add to the cost of manufacturing such borated cotton a manufacturer's profit, assuming 10 per cent. on the cost of such goods when delivered at

the store of defendant to be a reasonable manufacturer's profit in this case?

A. Yes.

22 Q. Please state the result of that calculation.

A. It will add $665.72 to the cost of borated cotton as delivered at the store of the defendant.

23 Q. Please state what difference in profit or loss the addition of the three charges added to the cost of making borated cotton by the defendant mentioned in your testimony to-day will make.

A. Instead of showing net profits $76.40 as per statement C, the result would show a net loss of $1,043.49.

24 Q. What will the result show if you leave out the item of manufacturer's profit?

A. A net loss of $377.77.

25 Q. What will it show if you leave out the item of compensation of the president's and manufacturer's loss and include only the labor on pounds left out in statement B?

A. A net loss of $18.95.

26 Q. Please state the amounts of sales of borated cotton by the defendant just before and after July 1st, 1883.

A. The first six months of 1883, the sales of borated cotton was 1,630¾ pounds. The second six months of 1883, the sales of borated cotton were 1,724¾ pounds.

27 Q. State the sales of borated cotton by the defendant for six months as near as you can before and after November 22d, 1888, that being the date on which the injunction in this action was served on defendant.

A. The first six months of 1888, the sales of borated cotton were 1,581 pounds 13 ounces. The first six months of 1889 they were 1,769½ pounds.

191 Cross-examined by A. KNAUTH, Esq.:

28 X Q. Do Benson's plasters contain any borated cotton?

A. No.

29 X Q. On what basis did you compute the value of the president's services as apportioned to borated cotton?

A. On the cost of the total merchandise consumed at the factory together with factory pay-roll, expense, loss on machinery, interest on real estate, interest on other plant and interest on capital invested at the factory. Averaged for a period of three years.

30 X Q. How did you apportion these various expenditures to borated cotton?

A. I took the percentage which the president's salary bore to the amount of the items as given in the last answer, and calculated the amount of increase in cost of borated cotton, as given in statement C, by deducting one-third of the total cost which is represented by the 50 per cent. of selling expenses as per statement B, by multiplying the remainder by the said percentage representing the president's services.

31 X Q. What machinery does the defendant use for making Benson's plasters?

A. I don't know.

NOVEMBER 6, 1889.

Mr. JOHN M. PETERS, a witness produced on the part of the defendant, being duly sworn, testifies as follows:

1 Q. What is your business?

A. I am treasurer of Seabury & Johnson.

2 Q. What is the nature of their business?

A. They are manufacturers of porous plaster, absorbent and medicated cottons, lint and surgical dressings of all sorts. I have been in business somewhat over four years.

192 3 Q. Are you conversant with the details and expenses of manufacturing the articles made by your company and carrying on such business?

A. I am.

4 Q. What in your opinion would be a fair and reasonable manufacturer's profit on cotton made under similar circumstances to those under which your company has made and makes that article?

A. I consider that no article in our line should pay less than 10 per cent. profit over and above every item of cost incurred in its manufacture and sale. This would apply to borated cotton.

5 Q. Do you mean by that in your opinion, based on your knowledge of the business, that 10 per cent. is a reasonable and fair net profit on the manufacture of borated cotton?

A. I would consider 10 per cent. a fair net profit on borated cotton, provided every item incurred in the manufacture and sale of the article had been computed before the profit was reckoned.

6 Q. Are you aware of the nature and extent of the services rendered by Mr. Seabury as president of the defendant?

A. I am.

7 Q. From such knowledge and of your knowledge of the defendant what in your opinion would be a reasonable compensation per annum for Mr. Seabury's services as such president?

A. I should say that $15,000 a year would be very reasonable compensation for a man of Mr. Seabury's ability in that position.

Cross-examined by A. KNAUTH, Esq.:

8 X Q. What does the defendant corporation do when you or any of the officers of the corporation ascertain that it makes no profit, or a profit less than 10 per cent. upon the articles manufactured by it?

A. It considers whether there are any incidental advan-
193 tages in manufacturing the article which will warrant continuing its manufacture at less than what is deemed a reasonable profit.

9 X Q. Did you ever have any discussion upon this point with reference to borated cotton?

A. We have discussed the subject.

40 X Q. Do you remember when you had this discussion?
A. Not exactly.

Cross-examination closed.

J. M. PETERS.

Sworn before me—
JOHN A. SHIELDS,
Examiner, &c.

NOVEMBER 20TH, 1889.

Defendant's counsel gives notice that he will read before the master the deposition of Maggie Stack, given at final hearing on September 26, 1889, and of Thomas B. Stillman, given at final hearing on September 26, 1887, also the depositions of S. W. Williams, Justice Wolfe and William Rupp, given at final hearing, and asks that the master mark the same.

The said depositions are accordingly marked for identification.

J. A. S., *Master.*

NOVEMBER 20TH, 1889.

Defendant closes.

194 *Statement "B."*

Statement of cost of cotton from July 1st, 1883, to October 1st, 1883, with absorbent cotton bought at 24 cents per lb., and boric acid and glycerine at the average of cost of purchases by us from July 1st, 1883, to November 22d, 1888.

100 lbs. cotton	$24 00
15 lbs. glycerine, $17.34	2 60
15 " boric acid at $18.23	2 73
Labor	1 00
	$30 33

Yields 130 lbs. borated cotton.

Cost of borated cotton in different-size packages, based on above figures, as follows:

In "bulk:"

130 lbs. cotton borated	$30 33
Labor and wrappers	1 30
Labels	50
Packing cases, (2 at 88 cents)	1 76
Total for 130 lbs.	$33 89
Equals 26.07 cents per lb. Add proportion of general expense of factory, not included in above charges, viz.,	
30 per cent. on above	26.07
30 %	7.82
	33.89

195 Gives cost of goods as shipped from factory. To which add proportion of expense of doing business, exclusive of factory expense and not included in above—viz., 50 per cent. on above figures 33.89
50 % 16.95

50.84

Gives 50.84 cents per lb. as cost to us of borated cotton sold in "bulk."

Cost of Other Sizes Based on Above Method of Calculation.

Pounds:

130 lbs. borated cotton	$30 33
130 cartons at $30	3 90
Labels at $3.50 per M	45
2 packing cases at 88 cents	1 76
	$36 44
Equals 28.03 cents per lb. Add proportions of expenses as above	28.03
30 %	8.41
	36.44
50 %	18.22
	54.66

Half pounds:

130 pounds cotton	$30 33
260 cartons at $24.55	6 40
Labor	1 30
Labels $1.25 per M	13
Packing cases	1 76
	$39 92
Equals	30.71 cents per lb.
Add 30 %	9.21
	39.92
50 %	19.96
	59.88

196 Quarter pounds:

130 lbs. cotton	$30 33
520 cartons at $15.89	8 26
Labor	1 30
Labels at $1.25 per M	65
Packing cases	1 76
	$42 30

Equals	32.53	cents per lb.
30 %	9.76	
	42.29	
50 %	21.14	
	63.43	

Eighth pounds:

130 pounds cotton	$30 33
1,040 cartons at $9.35	9 72
Labor, 4 cts. per lb	5 20
Labels, $1.25 per M	1 30
Packing cases	1 76
	$48 31

Equals	37.16	per pound.
Add 30 %	11.14	
	48.30	
Add 50 %	24.15	
	72.45	

Sixteenths:

130 lbs. cotton	$30 33
2,080 cartons at $6.45	13 42
Labor, 5 cents per lb	6 50
Labels, at $1.25 per M	2 60
Packing cases	1 76
	$54 61

197 Equals	42.00	cents per lb.
Add 30 %	12.60	
	54.60	
Add 50 %	27.30	
	$1.90	

From October 1st, 1883, to November 1st, 1888, the cost given is estimated in all respects the same as above, except that absorbent cotton, which had previously been bought by ourselves, was thereafter made by us from crude cotton, the average cost of which during the period of five years, one month and twenty-two days, was $11.40 per lb., making the cost of absorbent cotton as follows:

117 lbs. crude cotton at 11.40	$13 34
Materials for bleaching and rendering absorbent	1 65
Labor	1 17
Carding twice and lapping	4 68
	$20 84

This yields 100 lbs. of absorbent cotton at $20.84 instead of $24.00 as calculated in above estimates, and in the calculations of cost following October 1st, 1883, absorbent cotton is taken at $20.84, although we used many hundred pounds bought previously at $24.00. We thus give plaintiff the benefit of $3.16 on every 130 pounds of borated cotton made from cotton bought by us in absorbent form.

Calculated on the basis of $20.84 instead of $24.00 for the 100 lbs. absorbent cotton before borating, the finished cost of the different styles of packing is as follows:

Bulk, per lb.	44.59
Pounds	51.87
Half pounds	55.12
Quarter pounds	58.69
Eighth pounds	67.71
Sixteenth pounds	77.16
Thirty-second pounds	111.34

Statement "C."

Statement of sales of borated cotton from July 1st, 1883, to November 22d, 1888, in different styles of packing, with cost per pound on bases of calculation explained in statement "B," aggregate cost and aggregate net proceeds of sales as indicated by statement "A," and net results to Seabury & Johnson from such sales.

July 1st, 1883, to Oct. 1st, 1883.

Packages.	Lbs. sold.	Cost, cts. per lb.	Aggregate cost.	Aggregate proceeds from sales.
Bulk	234	50.84	$118 97.	$126 56
Pounds	304	54.66	166 17	183 46
Half pounds	208½	59.88	124 85	124 37
Quarter pounds	63½	63.43	40 29	40 44
Eighth pounds	52	72.45	37 67	33 98
Sixteenth pounds	146½	81.90	119 98	97 85
Thirty-second lbs.	None.			

Oct. 1st, 1883, to Nov. 22d, 1888.

Bulk	1,050	46.10	484 05	551 00
Pounds	4,586	49.92	2,289 33	2,688 35
Half pounds	1,757½	55.14	969 09	1,021 03
Quarter pounds	2,781½	58.69	1,632 46	1,622 66
Eighth pounds	954	67.71	645 95	619 08
Sixteenth pounds	4,336⅛	77.16	3,345 90	2,946 17
Thirty-second lbs.	10	111.34	11 18	7 29
	16,483⅛		9,985 84	$10,062 24
Net profits				76 40

Statement of Borated Cotton on Hand November 22d and Cost.

Package.	Quantity.	Cost, cts. per lb.	Value.
Bulk	None.		
Pounds	141	34.58	$48 76
Half pounds	121½	36.75	44 65
Quarter pounds	102½	39.13	40 12
Eighth pounds	4	45.14	1 81
Sixteenth pounds	215	51.44	110 60
	584		$245 95

(Statement A, being pp. 199 to 293, inclusive of this record, is omitted in printing per stipulation of counsel, which stipulation, containing a synopsis of the contents of statement A, will be found at side p. 354 of this record.)

* * * * * * *

294 *Statement for Identification. J. A. S., Master.*

Statement of borated cotton m'f'd and sold from July 1st, 1883, to November 22nd, 1888, with the cost, net selling price and net proceeds, and the stock on hand and unsold Nov. 22nd, 1888.

Sales from July 1st, 1883, to March 1st, 1888.

Style, package.	Sales—pounds.	Cost—cts. lb.	Selling price—cts. lb.	Margin. Profit.	Margin. Loss.	Net proceeds. Profit.	Net proceeds. Loss.
Bulk			None sold.				
Pounds	6,705	53.06	60.00	6.94		$465 33	
½ pounds	1,716	56.85	60.00	3.15		54 05	
¼ "	2,397½	59.05	64.00	4.95		118 66	
⅛ "	786	67.05	68.00	0.95		7 46	
1/16 "	3,403	75.06	68.00		7.06		$240 25

Sales from March 1st to Nov. 22nd, 1888.

Bulk	50	47.06	48.00	.94		0 47	
Pounds	497	53.06	52.00		1.06		5 27
½ pounds	259½	56.85	52.00		4.85		12 59
¼ "	359½	59.05	56.00		3.05		10 96
⅛ "	130	67.05	60.00		7.05		9 17
1/16 "	681	75.06	60.00		15.06		102 56
1/32 "	8	105.06	72.00		33.06		2 64
						645 97	$383 44

Total M'f'd, Sold, and on Hand.

Style of package.	Total manufactured July 1, '87, to Nov. 22, 1888.	Total sold July 1, '87, to Nov. 22, '88.	On hand Nov. 22, '88.
Bulk	50	50	None.
Pounds	7,323	7,182	141
½ pounds	2,097	1,975½	121½
1 "	2,859	2,756½	102½
¼ "	920	916	4
1/16 "	4,299	4,084	215
1/32 "	8	8	
	17,556	16,972	584

SEABURY & JOHNSON.
J. M. PETERS, *Treas.*

295 *Statement of Bonded Cotton on Hand November 22nd and Cost.*

Style of p'k'ge.	Quantity.	Cost—cts. lb.	Value.
Bulk	None.		
Pounds	141	35.37	49 87
½ pounds	121½	37.90	46 04
1 "	102½	39.37	40 35
¼ "	4	44.70	1 78
1/16 "	215	50.04	107 58
	584	.....	245 62

296 1886.

Page.	Bulks.		1 lb.		½ —.		¼ lb.		⅛ lb.		1/16 lb.	
	lb.		lb.		lb.		lb.		doz.		doz.	
13					6	5 00					6	5 00
14-15					15	12 50	9	7 50			18	15 00
16-17					6	5 00	3	2 50			9	7 50
18-19					6	5 00	12	10 00			6	5 00
21											12	10 80
23	65	45 50	4	3 35								
39			8	7 52								
54					½	63						
60-61			21	19 72	3½	3 29	1	0 94			9	8 46
65			15	13 16							½	0 50
69							2	1 88			12	11 27
71			3	3 25								
83			2	1 88	8	7 52	3½	3 29			24	21 60
91			1	0 94	1	94	1	0 94				
93			4	4 00								
95			2	2 70							½	0 13
97			5	4 50	2	1 88	1	0 94			18	16 44
103			10	10 00								
105			2	1 90								
111			3	3 00			3	3 00			2	2 00
113			50	45 00								
117			5	4 50								
120			1	1 07								
131			3	1 88								
136			1	1 25								
	65	45 50	139	129 63	48	41 76	35½	30 99	.....		116½	103 70

297 1886—Continued.

Page.	Bulks.		1 lb.		½ lb.		¼ lb.		⅛ lb.		1/16 lb.	
	lb.		lb.		lb.		lb.		doz.		doz.	
	65	45 50	139	129 63	48	41 76	35½	30 99			116 7/12	103 70
142			2	2 45								
167			2	2 50								
168			6	5 63								
182							2	1 88			1	0 94
185											2	1 88
194											2	2 26
201			2	2 25								
205			2	1 68							1½	1 26
207			5	5 00								
208											1	0 94
236			39	42 88								
243			6	5 64	2	1 88	1	0 94				
244					1	1 13	1	1 12			1½	1 41
253	10	7 00										
256-7			2	1 88	9	8 46	7	6 58			3	2 82
265			3	3 00								
266-7			1	0 94	1	0 94	2	1 88			1 1/12	1 97
268-9			3	2 70							36	32 40
274-5			4	3 76	4	3 76	3	2 82				
278-9			2	1 88	5	4 70	4	3 76				
284	60	40 00					35	26 25				
286			1	0 94							24	21 60
292			16	14 80	14	12 96	5	4 70			24	21 60
294			3	2 70	3	2 82	3	2 82			12	10 80
	135	92 50	258	230 26	87	78 41	98½	83 74			226½	203 58

298 1886—Continued.

Page.	Bulks.		1 lb.		½ lb.		¼ lb.		⅛ lb.		1/16 lb.	
	lb.		lb.		lb.		lb.		doz.		doz.	
	135	92 50	258	230 26	87	78 41	98½	83 74			226½	203 58
296			21	18 90								
298			1	1 00								
299			2	1 90								
300-1			1	2 00	½	0 62						
302			1	1 19								
304			2	2 25								
312-3	15	10 50										
315	10	7 00										
318-9											15	13 62
323			1	0 94								
336-7					1	0 94	¾	71			3	2 82
338							¾	70			1	0 94
344					½	0 63						
346			12	13 44								
354-5					7	5 84	3	2 50			18	15 00
356					6	4 50	6	4 50			6	5 00
360			1	1 00			½	0 50			1	1 00
372			4	3 90								
376			2	2 00								
	160	110 00	286	278 78	102	90 94	109½	92 65			270½	241 96

299 1887.

Page.	Bulks.		1 lb.		½ lb.		¼ lb.		⅛ lb.		1/16 lb.	
	lb.		lb.		lb.		lb.		doz.	oz.	doz.	oz.
4-'5			10	9 00			¼	25			1	1 00
12			2	2 48								
16			1	1 00								
24			5	5 00								
25			10	10 00								
34					1	1 13	½	0 57				
58-'9			11	9 49							2¾	2 15
70	8	5 60										
78							¼	24				
82			3	2 40								
90			10	10 00								
108											12	10 80
124			1	80								
130			5	4 69								
134							1	0 94				
146							¼	25				
169			2	1 80	2	1 80						
184	10	7 00	10	8 40							18	19 11*
198			1	70								
213			2	1 60							½	20
216-'7							1	0 75			37	29 55†
232			2	1 68	2	1 68	1	0 84				
238			10	7 50								
240			3	3 00								
244			5	5 00								
	18	12 60	93	84 54	5	4 61	4¼	3 84			70½	62 81

*{ 9 10.11. / 9 9.00.

†{ 12 10.30. / 25 18.75.

300 1887—Continued.

Page.	Bulks.		1 lb.		½ lb.		¼ lb.		⅛ lb.		1/16 lb.	
	lb.		lb.		lb.		lb.		doz.	oz.	doz.	oz.
	18	12 60	93	84 54	5	4 61	4¼	3 84			70½	62 81
246-'7					2	1 88	1¼	1 41			5	4 70
248-'9			4	3 62	5	4 56	3¼	2 81			5	4 00
258-'9			2	2 13	2	1 88	1¼	1 77			4	1 07
260-'1	40	28 00										
262	20	14 00										
268											3	2 25
276							3	2 50			6	5 00
277					3	2 50						
278-'9					3	2 50					18	15 00
280-'1					3	2 40	6	4 80			24	19 20
282-'3							3	2 25			12	9 00
284							3	2 25			15	11 82
286-'7											2½	2 20
304-'5							1½	1 20			12	10 20
307											12	9 30
326			11	7 70								
342-'3			4	3 60	3½	3 23	2	1 80			3	2 82
352-'3			10	9 90			2	1 88	½	0 85	3	2 82
354			2	1 60							9½	7 76
355			5	4 00							3	2 40
368-'9			4	4 25								
370-'1			2	2 00								
373			1	1 00								
375			1	1 00								
	78	54 60	139	125 34	26½	23 56	31¼	26 51	½	0 85	204½	172 35

301 1887—Continued.

Page.	Bulks.		1 lb.		½ lb.		¼ lb.		⅛ lb.		1/16 lb.	
	lb.		lb.		lb.		lb.		doz.	oz.	doz.	oz.
	78	54 60	139	125 34	26½	23 56	31	26 51	½	85	204	172 35
376–7			3	3 00								
408–1					½	57	¼	25			1	1 13
410			1	80							2	1 80
411			2	1 60	2½	2 00	¼	40			3	2 40
412							¼	60			2	1 60
458							¼	20				
	78	54 60	145	130 74	29½	26 13	33	27 96	½	0 85	212	179 28

302 N. Y. 1888.

I.

Page.	1 lb.		½.		¼.		1 oz.	
	No.	Pr.	No.	Pr.	No.	Pr.	No.	Pr.
150	1	1 00			¼	35		
152					¼	25		
154–5			2	2 00				
157	3	2 85						
161			½	50				
162–3	3	2 85						
164			½	50				
166–7			½	45	¼	25		
168–9			½	50	¼	30		
171	2	2 00						
176	1	1 25	½	50				
177			½	50	¼	30		
178					¼	30	4	30
180			½	50			1	15
16–7			2	1 93				
18–9	1	1 00			¼	30		
22	2	1 70	½	50				
23	3	2 85						
25	1	85	½	30				
26	2	1 70						
28	3	2 00					1	15
29	3	2 85	½	50				
30	1	1 00						
31	1	85					1	15
32–3	2	1 70					1	15
	28	$26 45	9	$8 68	1¾	$2 05	8 oz.	90c.

303 N. Y. 1888.

H.

For'd.	28	26 45	9	3 68	1¼	2 05	8	90
34–5			1	1 00				
40			½	45	¼	30		
42			½	50	¼	25		
44	1	1 00						
45	1	1 25						
	30	$28 70	11	$10 63	2¼	$2 60	8	90c.
			30	28 70				
			11	10 63				
			2¼	2 60				
			½	90				
			43¾	$42 83				

304 *Corrected Statement.*

1888.

Page.	B'lk.		1 lb.		½.		¼.		1 oz.	
	No.	Price.	No.	Pr.	No.	Pr.	No.	Pr.	No.	Pr.
57									3	3 00
109							1	75	24	18 00
131									½	45
153			1	90						
158									2	2 00
169					2	1 80				
182			1	75						
184–5									9	9 00
189	6	4 80								
204							1	90	1	90
218			6	4 80						
239			30	22 50	5	3 75			3	2 25
245			2	1 80	1	90	1	90		
257	145	94 25			1¼	1 41	¼	38		
268–9					¼	38	¼	56	19	13 75
285					3	2 25	3	2 25	12	9 00
312	5	3 50								
318			6	6 08						
344					1	90	2	1 80		
356			5	3 75	5	3 85	5½	4 30	8	6 00
381			1	1 25						
382					1	94				
385			5	5 00						
395			6	4 50						
396							2	1 50	15⅝	11 75
	156	102 55	63	51 33	20	16 18	16¼	13 34	97½	76 10

305 1888—Continued.

	Bulk.		1 lb.		½.		¼.		Doz. oz.		⅛ lb.	
	No.	Pr.	No.	Pr.	No.	Pr.	No.	Pr.	No.	Pr.	No.	Pr.
For'd	156	102 55	63	51 33	20	16 18	16½	13 34	97½	76 10		
404	10	6 50										
412–14												
414			3	2 25	6½	4 96	5½	4 17	4	3 04		
									14	1 00		
418									1	85		
422												
426			2	1 50	1	75	1	80	1	75		
436									6	4 80		
450			4	3 00	12	9 00	12	9 00	21	15 75		
458							½	20				
462					12	16 80						
478			4	3 00	3	2 25	2	1 50				
484			7	5 25								
488			5	3 25			3	2 10				
490			20	13 00								
574			5	3 75	5	3 75	5	3 75	5	3 75	5	3 75
92			5	3 75					13	9 75		
48					5	3 75	8	6 00	12	9 00		
58			5	3 75			1½	1 13	3	2 25		
66	85	55 25										
70					1	75	1	75				
72			6	4 80					2	1 60		
84			5	3 75	4	3 00	5	3 75				
											¼	19
98									12	9 00		
102												
103			3	2 25	3½	2 63	6	4 50	3	2 25		
	$255	$164 30	137	$104 63	82	63 82	67½	50 99	181½	$140 15	5¼	3 94

306 1888—Continued.

Page.	Bulk.		1 lb.		½.		¼.		Doz. 1 oz.		⅛ lb.	
	255	164 30	137	104 63	82	63 82	67½	50 99	181½	140 19	5¼	3 94
129			3	2 70								
148			3	2 25					6	4 50		
166					2	1 50	3	2 25				
228			1	90					1	90		
234					3½	2 80						
240	3	2 25										
270									6	6 00		
290			3	2 40								
	254	166 55	147	112 88	87½	68 12	70½	53 24	194½	151 55	5¼	3 94

307	Bulk.			1 lbs.			½ lbs.			¼ lbs.		
	No. of lbs.	Price, total.	Price, average, per lb.	No. of.	Price, total.	Price, average, per lb.	No. of lbs.	Price, total.	Price, average, per lb.	No. of lbs.	Price, total.	Average per lb.
1886	169	110 09	67.8	286	278 78	97.4	102	890 94	89.1	109½	92 65	84.6
1887	78	54 60	70	145	130 74	90.1	29½	26 13	88.7	33½	27 96	84.7
1888	254	166 55	65.5	147	112 88	76.6	87½	68 12	76.7	70½	53 25	75.7

Sold in Assorted Packages.

	No. of dozen lbs.	Equal to pounds.	Price, total.	Price, average, per lb.
1886	270½	202½	$241 96	$1 19.3
1887	212½	169½	179 28	1 05.6
1888	194½	145½	151 55	1 03.8

308	Bulk.		1 lb.		½.		¼.		⅛.		¼.
57									3	3 00	
109							1	75	24	18 00	
131									½	45	
153			1	90							
158					3	2 70			2	2 00	
182			1	75							
185									9	9 00	
189	6	4 80					1	90	1	90	
204											
218			6	4 80							
230			30	42 50	5	3 75			3	2 25	
245			2	1 80	1	90	1	90	6	4 50	
251	145	at 65							13	9 75	
268			2	1 49					½	56	
285					3	2 25	3	2 25	12	9 00	
312	5.70	3 50									
318			6	6 08	1	90					
344					5	3 85	2	1 80			
356			5	3 75			5½	4 30	8	6 10	
381			1	1 25	1	94					
382											
385			5	5 00							
395			6	4 50			2	1 50	15½	11 75	
396											
404	10.65	6 50									
414			3	2 25	5	3 75	5½	4 13	4	3 00	
418									1½	1 09	
422									1	85	
426			2	1 50	1	75	1	80	1	35	
436									6	4 80	
450			4	3 00	12	9 00	12	9 00	21	15 75	

	Bulk.		1 lb.		½.		¼.		⅛.		1/16.	
458							¼	20	(+25 — 20% = 20+)			
462					21	16 80						
478			4	3 00	3	2 44	2	1 50				
			7	5 25								
484			15	11 25			3	2 25	12	9 00		
488			5	3 25			3	2 10				
490			20	13 00								
514			5	3 75	5	3 75	5	3 75	5	3 75	5	3 75
22			5	2 75					13	9 75		
41					5	3 75	8	6 00	12	9 00		
58			5	3 75			1½	1 13	3	2 25		
66	85 lb.	6 54			1	75						
70							1	75				
72			6	4 80	4	3 00			2	1 60		
84			5	3 75			5	3 75			4oz.	19
98									12	9 00		
102			3	2 25	3½	2 63	6	4 50	3	2 25		
103			3	2 70								
129					3	2 70						
142							2	1 80				
148			3	2 25					6	4 50		
166					2	1 50	3	2 25				

Endorsed: C. G. Am Ende *vs.* Seabury & Johnson. Compl't's statement, June 25, 1889. J. A. S., master. U. S. circuit court. Filed Apr. 28, 1890. John A. Shields, clerk.

309 *Master's Report.*

Circuit Court of the United States, Southern District of New York.

CHARLES G. AM ENDE
vs.
SEABURY & JOHNSON. } In Equity.

To the judges of the circuit court of the United States for the southern district of New York:

The parties, duly represented by counsel, have attended before me, pursuant to the decretal order of the court, and have had abundant opportunity to present all the proofs in their opinion material to enable a correct statement of account, showing the gains, profits and advantages realized by the defendants, as well an assessment of the damages sustained by the complainant, in consequence of the infringement by the former, of the rights secured to the latter by the letters patent upon which the suit was brought. The proofs thus submitted have been reduced to writing, and are herewith returned to the court.

I am satisfied that the accounts made up and submitted, in accordance with my directions, correctly show the extent of the manufacture and sale of the infringing article, and I accordingly find and report, that the defendant manufactured 17,067$\frac{13}{16}$ pounds of borated cotton, and sold 16,483$\frac{1}{16}$ pounds, leaving on hand, and undisposed

of, 584 pounds. I am also satisfied that these accounts correctly show the cost of producing the infringing article, in so far as costs of material and the labor bestowed thereon are concerned, or so far as this special article is separable from the general business of the defendant, and up to this point, I believe, counsel for the respective parties are in substantial accord. The defendant seeks to
310 charge the article with further cost and expense, and upon this subject the views of counsel are very divergent. The defendant insists that to the amount referred to above, there should be added thirty per cent. to cover its proportionate share of the general expense of manufacture, which percentage is arrived at by taking the general expenses that cannot be distributed, such as fuel, freight, insurance, salaries of superintendent, fireman, engineer, carman, foreman, and assistant foreman, that are charged on his books to the factory proper, and which are incurred for the whole business carried on, and not for any particular article or department. In like manner, it insists that the general expense of the sales department of the entire business amounts to fifty per cent. of the sum finally determined as the cost of manufacture, and with the addition thereof the entire cost to the defendant is covered. It is contended by the complainant that the proofs show the falsity of this theory, and that it is solely intended to swell one side of the account to his disadvantage, and that it is manifestly unfair and should be disregarded. It is, however, conceded by complainant's counsel, that the defendant is entitled to further credit on account of manufacture and sale, and he suggests that the basis be found, not in defendant's way or method of doing business, but in accordance with the idea of complainant, as exemplified in his own business. As against the suggestion of complainant's counsel, it is sufficient to say that complainant's practices, either of economy or expense, can in nowise determine what it actually cost the defendant to manufacture and sell. That the complainant was extremely conservative, cautious and prudent in his business affairs, incurring such expenses only as, from his standpoint, seemed indispensible, sufficiently appears from his testimony. Business men have different business methods, and the economical and cautious habits of the complainant may possibly account for the smallness of his aggre-
311 gate sales, as compared with those made by the defendant. But whatever deductions may be drawn therefrom, it is well settled that the master's duty is to determine the profits actually made by the defendant, and not what possibly or probably might have been made by pursuing a different plan.

In this branch of the inquiry, therefore, the complainant's testimony must be disregarded, a basis for computation must be sought for elsewhere in the proof, and if none can be found, there must necessarily be a failure of proof.

The testimony shows that the defendant is engaged quite extensively in the manufacture and sale of these articles. To carry on this business, general expenses were incurred, of which every part must assume its just proportions, to be as accurately determined as the facts will permit. There may be articles which involve expense

entirely disproportionate to that required to make and sell the infringing goods, in which case the amounts being determined and allowance made therefor, a fair and just percentage of general expense could be computed (Hitchcock *v.* Tremaine, 9 Blatch., 385). The testimony in the case shows that the general business of manufacture included articles which required more expensive appliances, more power, perhaps greater attention and more skilled labor than did the article in question, but the evidence furnishes no means for the master to discriminate, and no serious attempt seems to have been made to provide a means for so doing. A conspicuous example is afforded in the sales department. Large sums were paid to advertise and sell Benson's capcine plasters, no part of which should be charged to borated cotton. The means of eliminating these sums are found in the testimony of Mr. Hopping, produced and examined on the part of the defense, from which it would seem that the fifty per cent. first claimed by the defendants as selling expense should be reduced to twenty-nine. I adopt this basis as the only
312 one disclosed, and as the one which, from all the facts, I believe to be approximately correct.

The defendant claims thirty per cent. as the general expense of carrying on the factory, and discloses the items upon which such percentage is computed. Two of these, interest on capital invested in real estate, and also machinery, are of doubtful legality (Goodyear *v.* Rubber Co., 9 Wall., 804,) and should be eliminated. This would reduce the percentage in this respect to 22¾ which, from the statements of the witnesses, does not seem to be excessive.

For the reason hereinbefore stated, I find and report that instead of the additions of thirty and fifty per cent. as claimed by the defendants to cover general expenses of manufacture and sale, the true and correct percentages should be twenty-two and three-quarter, and twenty-nine per cents. Applying these percentages in the manner shown by the proofs to be correct, the account would stand as follows:

July 1, 1883, to October 1, 1883.

Packages.	Lbs. sold.	Cost per lb.	Aggregate cost.	Proceeds from sales.
Bulk	234	.4128	$96 59	$129 56
Pounds	304	.4595	139 59	183 46
Half p'ds	208½	.4862	101 36	124 37
Qr. "	63½	....	32 70	40 44
E'g'th "	52	.5883	30 59	33 98
S'x'nth"	146½	.6650	97 42	97 85
Thirty-second lbs.				
From Oct. 1, 1883.				
Bulk	1,050	.3745	$393 22	531 00
Pound-	4,586	.4212	1,931 62	2,688 35
Half lbs.	1,757½	.4477	786 83	1,021 03
Qr. lbs.	2,781½	.4766	1,325 66	1,622 66
313 Eighth "	954	.55	524 70	619 08
S'x'nth"	4,336½	.6255	2,712 32	2,946 17
Thirty-second lbs.	10	.6255	6 25	7 29
			$8,178 85	$10,062 24
				8,178 85
Net profits on sales				$1,883 39
Deduct value on hand at cost				245 94
Net profits				$1,637 45

I therefore find and report that the defendants realized a sum of sixteen hundred and thirty seven dollars and forty-five cents, from its infringement of complainant's patent, and that the same was entirely due to such infringement.

I further find and report, that by reason of the presence in the market of the defendants as competitors, the complainant was forced to lower his prices for the patented article, in consequence of which he was damaged to the extent of two hundred and sixty-nine dollars and fourteen cents.

The complainant asks that damages to the extent of $12,574.39 be also assessed, upon the theory that but for the presence in the market of the defendants, he would have supplied the entire demand at his own prices. The proofs fall far short of sustaining such a finding, and the request is accordingly denied.

The defendant sought to have charged against the account of profits a proportionate amount of fifteen thousand dollars as a reasonable yearly compensation for its president. There is no proof that this officer was paid anything for his services, nor were the specific services rendered by him disclosed. This request is also denied.

Counsel for the respective parties submitted specific re-
314 quests in writing to find facts and conclusions of law, which are transmitted, with my action noted thereon.

All of which is respectfully submitted.

The objection of the defendant, numbered VI, to my draft report, calls my attention to an inconsistency in my report, which should be corrected. The findings in the tabulated statement forming part of the report, show that the defendant sold 16,483$\frac{3}{16}$ pounds; this should govern the prior statement, to which exception was taken, and the latter is corrected accordingly. All the other objections to the report, and to findings, are, after due consideration, overruled, and the report is signed and filed as my final report.

New York, April 28, 1890.

J. A. SHIELDS, *Master, &c.*

AM ENDE
v.
SEABURY & JOHNSON.

Defendant's Proposed Findings.

The master is requested to find as follows:

1. That before the period covered by the accounting, the patented article was not the only article on the market capable of the use for which the patented article was intended.

I so find.—J. A. S.

2. That during the period covered by the accounting, the patented article was not the only article on the market capable of the use for which the patented article was intended.

I so find.—J. A. S.

315 3. That during the period covered by the accounting, the defendant was not the only competitor in material intended for the same purpose as that for which the patented article was designed.

I do not so find.—J. A. S.

4. That there is no proof showing that during the period covered by the accounting, the defendant was the only competitor in material intended for the same purpose as that for which the patented article was designed.

I do not so find.—J. A. S.

5. That the complainant was not compelled to reduce the price of the patented article because of the competition of the defendant.

I do not so find.—J. A. S.

6. That there is no proof showing that the complainant was compelled to reduce the price of the patented article because of the competition of defendant, and that, *non constat*, the sale during the period of the accounting of the other articles intended for the same

purpose as the patented article, led to a reduction of price, if any was made.

I do not so find.—J. A. S.

7. That the complainant did not reduce his price twenty per cent. (20%) in the beginning of 1887, but reduced it gradually, if at all.

I do not so find.—J. A. S.

8. That complainant was not able to supply the patented material for the sale made by defendant of the infringing article.

I do not so find.—J. A. S.

9. That the proofs show that the complainant had not the facilities or ability to supply the patented material for the sales made by defendant of the infringing article.

I do not so find.—J. A. S.

316 10. That the proofs fail to show that the complainant would have sold the patented material to persons who bought the infringing article from the defendant, if defendant had not made the sales of the infringing article enumerated in the accounting.

I so find.—J. A. S.

11. That the proofs fail to show that the complainant would have sold the patented material to persons who bought the infringing article from the defendant if defendant had not made the sales of the infringing article enumerated in the accounting, because the proofs do not show that the persons who bought the infringing article from defendant were customers of complainant, or even knew of complainant, or that he sold the patented article.

I so find.—J. A. S.

12. That the proofs fail to show that the complainant would have sold the patented material to persons who bought the infringing article from the defendant if defendant had not made the sales of the infringing article enumerated in the accounting, because the proofs do not show but what the persons who bought the infringing article from the defendant would have bought borated cotton without glycerine or some other article intended for the same purpose as the patented article, if they had not been supplied with the infringing material from defendant.

I so find.—J. A. S.

13. That the proofs show that the persons who, during the period of the accounting, bought the infringing article from the defendant did, both before and after such period, purchase borated cotton containing no glycerine and for the same purposes and uses as those for which the infringing article was intended, and that this showing renders it probable that if they had not been supplied
317 with the infringing article they would have bought in lieu thereof the borated cotton containing no glycerine.

I do not so find.—J. A. S.

14. That the proofs show that defendants sold as much borated cotton containing no glycerine, both before and after the period of the accounting, saving only as to fluctuations, which were evidently due to seasons, as defendant sold of the infringing article during the period of the accounting, and that this showing renders it probable that if defendant had not made the sales of the infringing article it would have in lieu thereof sold a like quantity of the borated cotton containing no glycerine.

I do not so find.—J. A. S.

15. That the proofs fail to show that the complainant would have sold the patented material to persons who bought the infringing article from the defendant if defendant had not made the sales of the infringing article enumerated in the accounting, because *non constat* the sales made by defendant of the infringing article were due to the greater business tact, diligence, ability and efforts of the defendant.

I so find.—J. A. S.

16. That the proofs do not show that complainant's sales were reduced during the period of the accounting as compared with his sales before and after such period, and that therefore it is probable that the sales of the infringing article by the defendant did not reduce his sales.

I do not so find.—J. A. S.

17. That the proofs fail to show that the complainant suffered any damage through the sales which the defendant made of the infringing article, or by any act of defendant.

I do not so find.—J. A. S.

348 18. That the defendant made no gains, savings, advantages or profits by selling the infringing article.

I do not so find.—J. A. S.

19. That the defendants made no gains, savings, advantages or profits by the use of glycerine in the infringing article, but, on the contrary, suffered a loss of $2.60 per 130 pounds of the infringing material sold, owing to the use of glycerine therein.

I do not so find.—J. A. S.

20. That $15,000 was a reasonable sum in consideration of the services of George J. Seabury as president of the defendant.

I do not so find.—J. A. S.

21. That the complainant has failed to give any evidence towards separating that part of the profits or saving, if any, which is due to the patented feature in the material sold by the defendant during the period of the accounting from that part of the profits or saving, if any, which is not due to the patented feature, and has failed to give any evidence that the whole profits or saving made by the defendant, if any, is due to the patented feature.

I do not so find.—J. A. S.

22. That the complainant has failed to give any evidence toward separating that part of the damages, if any, which is due to the patented feature in the material sold by the defendant during the period of the accounting from that part of the damages, if any, which is not due to the patented feature.

I do not so find.—J. A. S.

N. T. M. MELLISS,
Sol. for Deft.

319 Circuit Court of the United States, Southern District of New York.

CHARLES G. AM ENDE, Complainant,
against
SEABURY & JOHNSON, Defendant. } In Equity.

The defendant requests the master to find the following propositions of law:

I.

That the burden of proof is on complainant.

I so find.—J. A. S.

II.

That the evidence on the part of the complainant must not be estimate, conjecture and opinion, but must be such as to afford a sound and safe basis of calculation.

I so find.—J. A. S.

III.

That the defendant should be allowed to prove the general expenses of its business, and to deduct the ratable proportion thereof from the profits made from the use of the patented article.

I so find, under the conditions stated in my report.—J. A. S.

IV.

That the defendant should be allowed to charge interest on the capital invested by it, as a part of the expense of the business.

I do not so find.—J. A. S.

320 V.

That the defendant should be allowed to charge the ratable proportion of the salary, or salaries, of its officers and employees, as a part of the expense of the business.

I do not so find.

VI.

That the complainant must separate that part of the profits, if any, which is due to the patented feature, from that part of the profits which is not due to the patented feature, or show that the

whole profit made by the defendant is due to the patented feature; and that if he fails to do this he cannot recover anything.

I so find.—J. A. S.

VII.

That the value of the improvement over the old method is the rule by which the profits, if any, of the defendant should be computed.

I do not so find.—J. A. S.

VIII.

That the complainant can only recover the actual damage suffered from the use of the improvement.

I so find.—J. A. S.

IX.

That the damages must be proved, by direct proof, and are not to be presumed.

I so find.—J. A. S.

X.

That unless the profit arising from the use of the patent is proved, complainant is only entitled to nominal damages.

I so find.—J. A. S.

324 XI.

That the profits, if any, are the proper measure of damages in this case; and that it is the profits which the infringer makes which govern, and not the profits which the complainant can show that he might or ought to have made.

I so find.—J. A. S.

XII.

That it cannot be presumed that the complainant would have made sales of the infringing article, made by the defendant, if the defendant had not made them.

I so find.—J. A. S.

XIII.

That the complainant must show, by direct proof, that the defendant prevented sales by the complainant by reason of its infringement.

I do not so find.—J. A. S.

XIV.

That in order to recover damages, caused by alleged forced reduction in prices, the complainant must establish, by satisfactory evidence, not only that reduction was caused by the infringement, but how much it was and how much was due to the fact that the infringing article contained the patented feature.

I so find.—J. A. S.

XV.

That the testimony of complainant, Am Ende, as to the cost of manufacture and selling of borated cotton, should not be considered in arriving at the cost to defendant of making and selling the same, as such testimony merely goes to show what, in the opinion of complainant, the cost and expenses of the defendant
322 ought to have been, and not what they were.

I so find.—J. A. S.

Dated New York, March 1, 1890.

N. T. M. MELLISS,
Solicitor for Defendant.

Complainant's Proposed Findings.

The master is requested to find as follows:

1. That the defendant was the only competitor of the complainant during the period covered by the accounting.

I so find.—J. A. S.

2. That owing to the competition of the defendant, complainant was compelled to lower his prices 20% in the beginning of the year 1887.

I so find.—J. A. S.

3. That complainant was amply able to supply the entire demand for borated cotton during the time defendant was selling its infringing article.

I so find.—J. A. S.

4. That no other article capable of taking the place of borated cotton was in market.

I do not so find.—J. A. S.

5. That complainant would have sold the borated cotton sold by the defendant, had it not been for the defendant's competition.

I do not so find.—J. A. S.

6. That defendant, by his wrongful manufacture and sale of the infringing borated cotton, made a profit of $3,583.74.

I do not so find.—J. A. S.

7. That complainant suffered a damage of $269.14 by loss
323 of profits in borated cotton sold by him after the reduction in price caused by the defendant's competition, and by reason of such reduction in price.

I so find.—J. A. S.

8. That complainant suffered a damage of $12,574.39 by the defendant's wrongful manufacturing and sale of borated cotton; the fact being that if complainant had sold defendants' 16,483$\frac{3}{16}$ lbs. he

would, on his own prices, as they were maintained before defendant's competition, have realized on such sales a profit of $12,574.39.

I do not so find.—J. A. S.

New York, February 26, 1890.

Respectfully submitted.

AV. BRESIN,*
Counsel for Complainant.

Circuit Court of the United States for the Southern District of New York.

CHARLES G. AM ENDE, Complainant,
against
SEABURY & JOHNSON, Defendant.

Defendant's Exceptions to Master's Report.

Exceptions taken by the defendant to the report made herein by John A. Shields, Esq., one of the masters of this court, to whom this cause was referred, by an interlocutory decree of this court made and entered on the 17th day of November, 1888, which report bears date the 28th day of April, 1890.

324 First exception. The defendant excepts to that part of said report which reads as follows, viz: "The means of eliminating these sums (meaning the sums paid to advertise and sell Benson's capcine plasters) are found in the testimony of Mr. Hopping produced and examined on the part of the defense, from which it would seem that the fifty per cent. first claimed by the defendant as selling expense, should be reduced to twenty-nine. I adopt this basis as the only one disclosed, and as the one which, from all the facts, I believe to be approximately correct." For that the same is error on the part of the master in that he therein improperly infers from the testimony of said Hopping that the selling expense of the defendant was 29%, because from said Hopping's testimony, as given in answer to questions 12, 13 and 14 on pp. 212 to 216 of the testimony, it appears that there are no facts disclosed from which the exact selling expense of the patented article can be inferred or ascertained. In support of this exception the master's attention was called, especially to the following portions of said testimony, but at the same time to all thereof, viz:

"12 Q. Are all of those items charged in that statement the expense of selling borated cotton and goods of a like character manufactured by defendants?

A. They are.

13 Q. Should they as a matter of fact be so charged?

A. No. The cost of advertising Benson's and an uncertain proportion of other advertising should not be charged to the expense of selling general merchandise, and the whole of the travelers' expenses should be charged to general merchandise.

14 Q. Explain, please, stating the figures, the correct charge
325 that should be made against borated cotton for its proportion of the selling expenses of the defendant.

* [Endorsed in pencil.]

A. The average amount spent in advertising Benson's plasters for 1886, 1887 and '8, including all of what we call general advertising, a variable proportion of which is for Benson's plasters, is $36,555. The average for the same years expended for travelers is $32,314. These two items amount to $68,869. This amount deducted from $132,473, the average store cost figured as already stated for the same period means $63,604 general expenses of selling goods of which Benson's plasters bear a proportionate part. I find that the sale of Benson's plasters for the period named averaged, as near as may be, 30 per cent. of the total sales. I therefore for convenience taking 30 per cent. of the amount stated above, $63,604, amounting to $19,081, and added thereto the amount of advertising Benson's plasters, including general advertising, namely, $36,555, making $55,636, thus eliminating substantially Benson's expenses from the general, leaving as chargeable to all other merchandise except Benson's, $76,837; thus showing that the proportion of expense of Benson's represented by the 50 per cent. is as $55,636 is to $132,473. * * * making an average profit for the year of $49,545, which is about 81 per cent. of the total profits. The expenses of all other merchandise is $76,837, and the profit thereon about 19 per cent. of the total profit. That is, the general merchandise cost to sell about 58 per cent. of the 50 mentioned in our calculations on statement B, at a net profit of 19 per cent. of the total profits, while Benson's cost to sell about 42 per cent. of the 50 mentioned in statement B, with a net profit of about 81 per cent. of the total profit."

And it was also contended before the master, and is now
326 claimed in support of this exception, that it appears from this testimony that the amount $36,555 was not stated as having been expended for advertising Benson's plasters, but for general advertising, only a variable "proportion" or "a proportionate part" of which was for Benson's plasters. What that "variable proportion" or "proportionate part" amounted to the witness failed to express, hence there is no evidence from which it can be determined or even conjectured what the advertising for Benson's plasters exclusively aggregated. The burden was upon the complainant to make the separation, and this he failed to do. Manifestly, in view of the absolute impossibility of ascertaining the amount expended in advertising Benson's plasters alone, it is improper to make the computation which has been made and upon which the finding as to these profits has been based.

In speaking afterwards with reference to that part of the business relating to Benson's plasters, the witness, it is true, speaks of the cost to sell Benson's plasters, but, taking this language in connection with the context, it is clear that the witness is invariably talking of a calculation in which the aforesaid amount of $36,555 was involved, and as he has clearly stated that only a portion of this sum was for Benson's plasters, his testimony not only affords no basis for the calculation which has been made, but clearly shows that such a calculation would be improper, because it would involve general advertising to an extent not known, as well as the especial advertising for Benson's plasters. And the defendant claims under

this exception that the following portions of the master's report should be corrected, for the reasons below stated, namely: 1st, that part of said report which reads, "The defendant claims 30% as the general expense of carrying on the factory, and discloses the items on which such percentage is computed. Two of these, interest on capital invested in real estate, and also machinery, are of doubtful legality and should be eliminated. This would re-
327 duce the percentage in this respect to 22¾, which from the statement of the witnesses, does not seem to be excessive," for that, the same is error, in not allowing the defendant to include interest on capital invested, and on value of machinery, in computing amount of general factory expenses. 2d. That part of said report which reads, "I find and report that instead of the addition of thirty and fifty per cent. as claimed by the defendants, to cover general expenses of manufacture and sale, the true and correct percentages should be twenty-two and three-quarters, and twenty-nine per cents.," for that such finding or report is error, for the reasons above stated, and because said percentages should be, as claimed by defendant, in its statement B, as appears from the testimony of the witnesses Peters, Crissey and Hopping, 50% for general expense of selling and 30% for general factory expense. 3rd. That said report does not find, as it should, that the defendant is entitled to charge, and should be credited with interest on its capital invested and on its machinery used in its business, as a part of its general factory expenses.

Second exception.—The defendant excepts to that part of said report which reads, "I therefore find and report that the defendant realized a sum of $1,637.45 from its infringement of the complainant's patent, and that the same was entirely due to such infringement," because such a conclusion should not be drawn from the testimony, for the reasons set out in the foregoing exception, but the master should have found that there were no profits realized from the infringement by the defendant, because there was no testimony offered by either party going to show what part of the profits, if any were realized, were due to the patented feature, or to separate the profits due to the patented feature, if any, from those, if any, not due to it.

328 Third exception.—The defendant excepts to that part of said report which reads, "I further find and report, that by reason of the presence in the market of the defendants as competitors, the complainant was forced to lower his prices for the patented article, in consequence of which he was damaged to the extent of two hundred and sixty-nine dollars and fourteen cents," for that the same is error, because there is nothing in the testimony that would justify the conclusion that the complainant did reduce his prices to that extent, or that goes to show that any reduction that he did make was due to the competition of the defendant in selling the patented article, and not to the sales by others of a similar article or articles, or to the usual competition or fluctuations of trade.

Fourth exception.—The defendant excepts to the master's report

in that he therein does not find and report, as he should, that the defendant made no gains, savings, advantages, or profits by selling the infringing article, but, on the contrary, made a net loss of $18.95 by reason thereof, as appears from defendant's statements A and B, and from the testimony of defendant's witnesses Peters and Hopping.

Fifth exception.—The defendant excepts to the master's report in that he does not find and report therein, as he should, that the defendant made no gains, savings, advantages, or profits, by the use of glycerine in the infringing article, but, on the contrary, suffered a loss of $2.60 on every 130 lbs. of the infringing material sold by reason of the use of glycerine therein, as is shown by defendant's statement B, and the testimony of the witnesses Peters and Hopping explanatory thereof.

Sixth exception.—The defendant excepts to the master's report, because he does not find and report therein, as he should, 1st. That the complainant has failed to give any evidence towards
329 separating that part of the profits or savings, if any, which is due to the patented feature in the material sold by the defendant, during the period of the accounting, from that part, of the profits, or savings, if any, which is not due to the patented feature, and has failed to give any evidence that the whole profit or saving, if any, made by the defendant, is due to the patented feature; and 2d. That the complainant has failed to give any evidence towards separating that part of the damage, if any, which is due to the patented feature in the material sold by the defendant during the period of the accounting, and which, as complainant contends, caused a reduction of complainant's price; from that part of the damages, if any, which is not due to the patented feature.

Dated New York, May 31st, 1890.

N. T. M. MELLISS,
Solicitor for Defendant,
69 *Wall street, New York, N. Y.*

Circuit Court of the United States for the Southern District of New York.

CHARLES G. AM ENDE, Complainant,
against
SEABURY & JOHNSON, Defendant.

SIR: Please take notice that the defendant hereby excepts to the refusal of the master to find the following proposed findings
330 of fact, submitted by it on the accounting herein, upon the respective grounds hereinafter set out.

I.

The defendant excepts to the master's refusals to find third and fourth proposed findings of fact, on the ground that there was evidence given before him, going to show that during the period of the accounting, the defendant was not the only competitor in ma-

terial intended for the same purpose as that for which the patented article is designed, and that such evidence will be found on page 19 of complainant's proofs at final hearing.

II.

The defendant objects to the master's refusal to find the fifth proposed finding of fact, because there is no evidence in the testimony that the complainant was compelled to reduce the price of the patented article, by reason of the competition of the defendant, and because there is no reliable evidence in the case upon which to base a finding of fact that the complainant did reduce his price, as the complainant's statements furnished on the accounting contained many errors and are made up from his recollection to a great extent, and should therefore not be regarded. (See the complainant's cross-examination, especially cross-questions 144 to 176 inclusive.)

III.

The defendant excepts to the refusal of the master to find the sixth proposed finding of fact, upon the grounds stated in the second exception, and upon the ground that if any reduction was made by the complainant in the price of the patented article during the period of the accounting, *non constat*, such reduction was caused by the sale and competition of other articles intended for the same purpose as the patented article; and that if this were not the
331 case, the burden of proving the fact so to be, was on the complainant, although it was shown by the testimony that other articles were made and sold for the same purpose as the patented article by others.

IV.

The defendant excepts to the master's refusal to find the seventh proposed finding of fact, on the ground that there is no evidence in the testimony showing that the complainant reduced his price twenty per cent. in the beginning of the year 1887, other than the unsupported statement of the complainant, but that the evidence of his statement and testimony is, that he reduced the price, if at all, gradually.

V.

The defendant excepts to the master's refusal to find the thirteenth proposed finding of fact, on the ground that the testimony taken before him sustains the request in that finding contained, as will appear from a perusal of the testimony of the witness Hopping, on pages 224 and 225 of the testimony, where he states, that the sales just before the period of the accounting, namely, for the first six months of 1883, of borated cotton by the defendant, which did not contain the patented article, amounted to, in the figures, 1,690$\frac{3}{4}$ lbs.; and for the second six months of 1883, during all which time such cotton contained patented article, the sales amounted to 1,724$\frac{3}{4}$ lbs.; and that for the first six months of 1888, such sales, which then contained the patented article, amounted to 1,581$\frac{3}{16}$ lbs.; and

that for the first six months of 1889, such sales, which did not then contain the patented article, amounted to 1,769½ lbs. That during the first and last six months mentioned the borated cotton contained no glycerine, and that therefore; it is submitted that
332 these facts do show that it is possible, that if the defendant's customers had not been supplied with the infringing article by the defendant during the period of the accounting, they would have bought in lieu thereof the borated cotton containing no glycerine, and that consequently the master should find the facts submitted in this proposed finding.

VI.

The defendant excepts to the master's refusal to find the fourteenth proposed finding of fact, upon the same ground and for the same reason urged against his refusal to find the thirteenth proposed finding of fact.

VII.

The defendant excepts to the master's refusal to find the seventeenth proposed finding of fact, upon the ground that the proofs fail to show that the complainant suffered any damage through the sales made by defendant of infringing article, or by reason of any acts of defendant, or to show the extent or measure of any such damage.

VIII.

The defendant excepts to the master's refusal to find the nineteenth proposed finding of fact, because there is no evidence in the testimony showing that the defendant gained any advantage or profit by selling the infringing article, over what it made or gained in selling another article intended or sold for the same purpose, and because it is shown; that on the contrary it lost on every 130 pounds sold of the infringing article, the cost to it of the amount of glycerine used therein, namely, the sum of $2.60, as appears by reference to pp. 224 and 225 of the testimony and defendant's statement B produced pursuant to the master's order of January 10th, 1889, and to the testimony of defendant's officers explanatory thereof.

333 IX.

The defendant excepts to the master's refusal to find the twenty-first proposed finding of fact, because the complainant has failed to give any evidence tending to separate that part of the profits, or savings, if any, which is due to the patented feature in the material sold by the defendant during the period of the accounting, from that part of the profits, or savings, if any, which is not due to the patented feature, and has failed to give any evidence that the whole profit, or saving, if any, made by the defendant, is due to the patented feature, and that, therefore, the defendant is entitled to have the master find as requested in said twenty-first proposed finding.

X.

The defendant excepts to the refusal of the master to find the twenty-second proposed finding of fact, because the complainant has failed to give any evidence towards separating that part of the damages, if any, which is due to the patented feature in the material sold by the defendant during the period of the accounting, and that part of the damages, if any, which is not due to the patented feature, and that, therefore, the defendant is entitled to have the master find as requested in said twenty-second proposed finding of fact.

Dated, New York, May 31st, 1890.

N. T. M. MELLISS,
Solicitor for Defendant, 69 *Wall Street, New York, N. Y.*

334 Circuit Court of the United States for the Southern District of New York.

CHARLES G. AM ENDE, Complainant,
against
SEABURY & JOHNSON, Defendant.

The defendant excepts to the refusal of the master to change his action in regard to the third proposition of law submitted to him by it on the accounting herein, as to which the master qualifies his assent by writing, "I so find under the conditions stated in my report," whereas he should have made an unqualified finding or refusal to find said proposition of law; and the defendant further excepts to the master's action thereon, because it claims it is entitled to have him find said proposition of law, as requested; and the defendant also excepts to the refusals of the master to find the fourth, fifth, seventh and thirteenth propositions of law submitted by it to him, because the same each correctly state the rule of law thereby intended to be stated.

Dated, New York, May 31st, 1890.

N. T. M. MELLISS,
Solicitor for Defendant, 69 *Wall Street, New York, N. Y.*

335 United States Circuit Court, Southern District of New York.

AM ENDE
vs.
SEABURY AND JOHNSON.

WALLACE, *J.*:

None of the exceptions filed by the defendant to the master's report are well taken.

1. The corporation defendant manufactured and sold the borated cotton of the complainant's patent, and it was properly held liable for *from* the profits derived from the manufacture and sale of that article, notwithstanding it might have made and sold the cotton, boracic acid, and glycerine which are the ingredients of borated cotton, if it had chosen to do so, and at the same or even a larger

profit. Instead of selling these ingredients, however, the defendant preferred to convert them into the new chemical composition invented by the complainant, and whatever profit it derived accrued by reason of appropriating the patented invention.

336 2. The master properly refused to allow the defendant, as an element of the "factory cost" of the borated cotton, interest on the capital of the corporation invested in its business. As the Supreme Court say in disallowing a similar item in Rubber Co. *v.* Goodyear (9 Wallace, 804), in ascertaining profits "the calculation is to be made as a manufacturer calculates the profits of his business. In calculating profits manufacturers customarily treat as items of expense interest paid out on money borrowed for the use of the business, as well as rent paid for the use of property in the business, but it is not customary to charge against profit interest upon the capital embarked by the owners in the enterprise, or rent for the use of property owned by them. There is nothing inconsistent with this conclusion in the opinion in Manufacturing Co. *v.* Cowing (105 U. S., 257), because, for all that appears, in that case the "use of tools, machinery, and power" for which it was said an allowance should be made to the defendant may have been a hired use.

337 3. The master properly disallowed the item of $15,000 per annum for salary of the president of the defendant as an element of cost, because it was not shown that the president was a salaried officer. The defendant introduced evidence to show what compensation would be reasonable for such services as were performed by the president of the defendant, but for all that appears he was serving without compensation. If he had been paid any salary the fact could and would have been shown.

4. The master properly found that the percentage for selling expenses which should be added to the factory cost of all the goods sold by the defendant, exclusive of the goods known as "Benson's plasters," was twenty-nine per cent. The fair interpretation of the very confusing statement of the cashier of the defendant is that instead of fifty per cent. the amount to be added was $\frac{765}{1524}$ of fifty per cent.

5. The testimony showed that the defendant was the only competitor of the complainant in the market in selling the borated cotton of the patent, and that in consequence of the reduc-

338 tion of price made by the defendant the complainant was compelled to reduce his price in order to retain his customers. The loss entailed upon him by reason of this enforced reduction of price was a proper item of damages, and was properly allowed by the master.

(Endorsed:) Am Ende *vs.* Seabury and Johnson. Opinion. Wallace, J.

(File-mark:) U. S. circuit court. Filed Aug. 6, 1890. John A. Shields, clerk.

339 At a stated term of the circuit court of the United States of America for the southern district of New York, in the sec-

ond circuit, held at the city of New York on the 26th day of August, in the year of our Lord one thousand eight hundred and ninety.

Present: Hon. William J. Wallace, circuit judge.

CHARLES G. AM ENDE
vs.
SEABURY AND JOHNSON.

This cause having come on to be heard upon the report of John A. Shields, Esquire, a master of this court, to whom it was referred to ascertain, take, and state and report to the court the quantity of borated cotton made and the quantity used and the quantity sold by the said defendant, Seabury and Johnson, in infringement of the claim of said letters patent No. 181,024, and the quantity of such borated cotton which the said defendant has on hand,
340 and the gains, profits, savings, and advantages derived by the said defendant from and through the said infringements, and to assess the damages thereby suffered by the complainant, which report bears date the 28th day of April, 1890, and also upon exceptions taken to said report on the part of the said defendant and upon the equity reserved; and the said cause having been argued by counsel and due deliberation had thereon, it is, on motion of Messrs. Briesen & Knauth, solicitors for complainant, ordered, adjudged, and decreed, and this court, by virtue of the power and authority therein vested, doth order, adjudge, and decree, that the defendant has made a profit of one thousand six hundred and thirty-seven dollars and forty-five cents by its infringement of complainant's rights under his said letters patent, and that the complainant has suffered a damage thereby of two hundred and sixty-nine dollars and fourteen cents, and that the exceptions to said master's report be, and the same hereby are, overruled and the said report is in all things hereby confirmed.

And it is further ordered, adjudged, and decreed, and this court, by virtue of the power and authority therein vested, doth
341 order, adjudge, and decree, that the said defendant pay to the said complainant the sum of one thousand nine hundred and six dollars and fifty-nine cents, with interest thereon from the date of the filing of the master's report, to wit, April 28, 1890.

And it is further ordered, adjudged, and decreed that the interlocutory decree heretofore and on the 19th day of November, 1888, entered herein be, and the same hereby is, made final.

And it is further ordered, adjudged, and decreed that the said defendant pay to the said complainant his costs in this suit to be taxed, and that the said complainant have execution for such costs and for the sums above decreed to be paid to said complainant as aforesaid, and for which sums judgment is hereby entered.

(Signed) WM. J. WALLACE.

(Endorsed:) U. S. circuit court, southern district of New York. Charles G. Am Ende *vs.* Seabury and Johnson. Final decree. Briesen & Knauth, complainant's solicitors, 229 Broadway, New York.

(File-mark:) U. S. circuit court. Filed Aug. 26, 1890. John A. Shields, clerk.

342 Circuit Court of the United States, Southern District of New York.

CHARLES G. AM ENDE
vs. In Equity.
SEABURY AND JOHNSON.

It is hereby stipulated that the foregoing may constitute the record to be sent by the clerk of this court to the Supreme Court of the United States on the appeal to said Supreme Court in the above cause, without prejudice to any motion hereafter to be made to correct the same, and that the exhibits in the cause be retained in the possession of the clerk of this court until the hearing on appeal in said Supreme Court.

New York, October 14th, 1890.

N. T. M. MELLISS,
Sol. for Def't.

A. V. BRIESEN,
Counsel for Appellee.

Endorsed: U. S. circuit court. Filed Oct. 14th, 1890. John A. Shields, clerk.

343 Circuit Court of the United States for the Southern District of New York. In Equity.

CHARLES G. AM ENDE, Complainant and Appellee,
against
SEABURY AND JOHNSON, Defendant and Appellant.

To the honorable the Supreme Court of the United States:

The appeal of Seabury & Johnson, defendant and appellant, respectfully showeth:

That on the 9th day of June, 1887, the above-named complainant and appellee filed his bill of complaint in the circuit court of the United States for the southern district of New York against the above-named defendant and appellant to enjoin and restrain the said defendant and appellant from infringing certain letters patent of the United States for improvement in composition of bo-
344 rated cotton in said bill of complaint set forth, and also praying for an account of profits and assessment of damages arising from said infringement; that a subpœna issued out of said circuit court and was duly served upon said defendant and appellant; that the said defendant and appellant filed its answer to said bill of complaint, to which complainant and appellee filed a general replication.

That such proceedings were had in the said cause that on the 26th day of August, 1890, a final decree was entered therein in the words and figures following:

"This cause having come on to be heard upon the report of John A. Shields, Esquire, a master of this court, to whom it was referred to ascertain, take, and state and report to the court the quantity of borated cotton made and the quantity used and the quantity sold by the said defendant, Seabury and Johnson, in infringement of the claim of said letters patent No. 181,024, and the quantity of such borated cotton which the said defendant has on hand, and the gains, profits, savings, and advantages derived by the said defend-
345 ant from and through the said infringement, and to assess the damages thereby suffered by the complainant, which report bears date the 28th day of April, 1890, and also upon exceptions taken to said report on the part of the said defendant and upon the equity reserved; and the said cause having been argued by counsel and due deliberation had thereon—

"It is on motion of Mess. Briesen & Knauth, solicitors for complainant, ordered, adjudged, and decreed, and this court by virtue of the power and authority therein vested doth order, adjudge, and decree, that the defendant has made a profit of one thousand six hundred and thirty-seven dollars and forty-five cents by its infringement of complainant's rights under his said letters patent, and that the complainant has suffered a damage thereby of two hundred and sixty-nine dollars and fourteen cents, and that the exceptions to said master's report be, and the same hereby
346 are, overruled, and the said report is in all things hereby confirmed.

"And it is further ordered, adjudged, and decreed, and this court by virtue of the power and authority therein vested doth order, adjudge, and decree, that the said defendant pay to the said complainant the sum of one thousand nine hundred and six dollars and fifty-nine cents, with interest thereon from the date of the filing of the master's report, to wit, April 28th, 1890.

"And it is further ordered, adjudged, and decreed that the interlocutory decree heretofore and on the 19th day of November, 1888, entered herein be, and the same hereby is, made final.

"And it is further ordered, adjudged, and decreed that the said defendant pay to the said complainant his costs in this suit, to be taxed, and that the said complainant have execution for such costs and for the sums above decreed to be paid to said complain-
347 ant as aforesaid and for which sums judgment is hereby entered."

That said costs were taxed and a final judgment entered herein on the 26th day of August, 1890, against said defendant and appellant for the sum of twenty-three hundred and forty-nine dollars and fifteen cents.

Wherefore this appellant appeals from the whole of said decree of said circuit court of the United States, and it prays that this its appeal may be allowed, and that a transcript of the records, pleadings, proceedings, and evidence in the cause, duly authenticated, may be sent to the Supreme Court of the United States without delay, and that said Supreme Court may proceed to hear the cause anew, and that the said decree of the circuit court may be reversed

or such other decree made as to the said Supreme Court shall seem just.

(Signed) N. T. M. MELLISS,
Defendant's Solicitor, 69 Wall Street, New York City.

348 The foregoing appeal is hereby allowed.
New York, September 5th, 1890.
(Signed) ADDISON BROWN.

(Endorsed:) U. S. circuit court, southern district of New York. Charles G. Am Ende *vs.* Seabury and Johnson. Appeal and allowance. N. T. M. Melliss, sol'r for def't, 69 Wall St., New York. Due service of a copy of the within appeal and allowance is hereby admitted this 5 day of Sept., 1890. (S'g'd) Briesen & Knauth, solicitors for compl't.

(File-mark:) U. S. circuit court. Filed Sep. 6, 1890. John A. Shields, clerk.

349 Circuit Court of the United States of America, for the Southern District of New York, in the Second Circuit.

CHARLES G. AM ENDE *vs.* SEABURY AND JOHNSON. } Bond for Damages and Costs.

Know all men by these presents that we, Seabury & Johnson, William E. Ebbitt, merchant, of No. 123 West 11th street, New York city, and Charles S. Whitney, merchant, of No. 1261 Pacific street, Brooklyn, Kings county, are held and firmly bound unto the above-named Charles G. Am Ende in the sum of six thousand ($6,000.00) dollars, to be paid to the said Charles G. Am Ende; for the payment of which, well and truly to be made, we bind ourselves and each of us, our and each of our heirs, executors, and administrators, jointly and severally, firmly by these presents. Sealed with our seals and dated the fifth day of September, in the year of our Lord one thousand eight hundred and ninety.

Whereas the above-named Seabury & Johnson has prosecuted an appeal to the Supreme Court of the United States to reverse the final decree rendered in the above-entitled suit by the judge of the circuit court of the United States, for the southern district of New York—

Now, therefore, the condition of this obligation is such that if the above-named Seabury & Johnson shall prosecute said appeal to effect and answer all damages and costs if it fail to make said appeal good, then this obligation shall be void; otherwise the same shall be and remain in full force and virtue

SEABURY & JOHNSON, [L. S.]
By G. M. PETERS, *Treas'r.*
WILLIAM E. EBBITT. [L. S.]
CHARLES S. WHITNEY. [L. S.]

Sealed and delivered and taken and acknowledged this fifth day of September, 1890, before me.

(S'g'd) JOHN E. McEWAN,
[NOTARIAL SEAL.] *Notary Public, Kings County.*

Certif. filed in New York Co.

350 [Endorsed:] U. S. circuit court, southern district of New York. Charles G. Am Ende *vs.* Seabury & Johnson. Bond for damages and costs on appeal to Supreme Court of U. S. N. T. M. Melliss, sol'r for def't, 69 Wall St., N. Y.

(Endorsed:) U. S. circuit court. Filed Sep. 5, 1890. John A. Shields, clerk.

Approved as to form and amount and as to the sufficiency of the sureties.

Dated N. Y., Sep. 5th, 1890.

(S'g'd) ADDISON BROWN.

UNITED STATES OF AMERICA, } *ss:*
Southern District of New York, }

William E. Ebbitt and Charles S. Whitney, being severally duly sworn, each depose and say that they are each worth the sum of twelve thousand $\frac{00}{100}$ dollars over and above all their just debts and liabilities.

(S'g'd) WILLIAM E. EBBITT.
(S'g'd) CHARLES S. WHITNEY.

Sworn to this fifth day of September, A. D. 1890, before me.

(S'g'd) JOHN E. McEWAN,
[NOTARIAL SEAL.] *Notary Public, Kings County.*

Certif. filed in New York Co.

351 UNITED STATES OF AMERICA, *ss:*

To Charles G. Am Ende, Greeting:

Whereas Seabury & Johnson has appealed to the Supreme Court of the United States from the decree lately rendered in the circuit court of the United States for the southern district of New York made in favor of you, the said Charles G. Am Ende, and against the said Seabury & Johnson—

Therefore you are hereby cited to appear before the said Supreme Court, at a term thereof to be holden at Washington on the second Monday of October, 1890, to do and receive what may appertain to justice to be done in the premises.

Witness the Honorable Melville W. Fuller, Chief Justice of the Supreme Court of the United States, this fifth day of September, in the year of our Lord 1890.

(Signed) ADDISON BROWN.

Endorsed: U. S. circuit court, southern district of New York. Chas. G. Am Ende, complainant & appellee, *vs.* Seabury & 352 Johnson. Citation. N. T. M. Melliss, s'l'r for def't & app'l't, 69 Wall St. Due and timely service of a copy of the within citation is this day admitted. Dated New York, Sept. 5, '90. Brisson & Knauth, comp't's sol'r. U. S. circuit court. Filed Sept. 6, 1890. John A. Shields, clerk.

353 UNITED STATES OF AMERICA, } ss:
Southern District of New York, }

I, John A. Shields, clerk of the circuit court of the United States of America for the southern district of New York, in the second circuit, do hereby certify that the foregoing pages, numbered from one to 352 inclusive, contain a true and complete transcript of the record and proceedings had in said court in the case of Charles G. Am Ende, complainant & appellee, against Seabury and Johnson, defendants and appellants, as the same remain of record and on file in said office.

Seal of U. S. Circuit Court, South. Dist. of New York.

In testimony whereof I have caused the seal of the said court to be hereunto affixed at the city of New York, in the southern district of New York, in the second circuit, this 14th day of October, in the year of our Lord one thousand eight hundred and ninety, and of the Independence of the said United States the one hundred and fifteenth.

JOHN A. SHIELDS, *Clerk.*

354 Supreme Court of the United States.

CHARLES G. AM ENDE, Complainant & Appellee, }
against
SEABURY & JOHNSON, Defendant & Appellant. }

It is hereby stipulated and agreed by and between the parties to the above-entitled action, that the exhibit filed on the part of Seabury & Johnson on the accounting before the master in this suit, which is marked "Statement A," need not be printed at length on account of its bulk, but that in lieu thereof the said Seabury & Johnson cause to be printed in the appeal book in this suit the following synopsis of the contents of said Statement A, namely:

"*Statement A.*

"This statement contains an itemized list of each and every sale of borated cotton made by Seabury & Johnson from July 1st, 1883, to November 22nd, 1889, both inclusive.

Said statement shows that during said period said Seabury & Johnson sold 16,483 lbs. and 13 oz. of borated cotton, and that the gross amount received from such sales was the sum of $12,493.59, and the net amount received from such sales was $10,062.24.

355 Said statement is verified by the affidavit of George J. Seabury, as president of Seabury & Johnson, which affidavit is dated February 27th, 1889."

Dated New York, December 4th, 1893.

ARTHUR v. BRIESEN,
Counsel for Complainant & Appellee.
EDWIN H. BROWN,
Counsel for Defendant & Appellant.

356 [Endorsed:] Case No. 14325, Supreme Court U. S. October term, 1893. Term No. 285. Seabury & Johnson, appellants, *vs* Charles G. Am Ende. Stipulation to omit Statement A from printed record and giving synopsis thereof. Filed Jan'y 8, 1894.

Endorsed on cover: Case No. 14,325. S. New York, C. C. U. S., No. 285. Seabury & Johnson, appellant, *vs.* Charles G. Am Ende. Filed October 17, 1890.

Office Supreme Court U. S.
FILED.
MAR 6 1894
JAMES H. McKENNEY,
CLERK.

Supreme Court of the United States,

OCTOBER TERM, No. 285.

SEABURY AND JOHNSON,

Appellant,

vs.

CHARLES G. AM ENDE,

Appellee.

Appeal from the Circuit Court of the United States for the Southern District of New York.

BRIEF FOR APPELLANT.

NORMAN T. M. MELLISS,
EDWIN H. BROWN,
Counsel for Appellant.

The Evening Post Job Printing House, New York.

Supreme Court of the United States.

SEABURY & JOHNSON, Appellants, AGAINST CHARLES G. AM ENDE, Appellee.	October Term, 1893. No. 285.

BRIEF FOR APPELLANT.

I.—Statement of the Case.

This is an appeal from the Circuit Court of the United States for the Southern District of New York, in a suit brought by appellee for an injunction and accounting because of an alleged infringement by appellant of U. S. Patent 181,024, which was granted to the appellee on August 15, 1876, for a new and improved borated cotton; the application for said patent having been filed April 17th in the same year.

In the Court below, his Honor Judge Coxe presiding, an interlocutory decree was rendered for appellee, and after a reference to John A. Shields, Esq., as Master, to take and state to the Court the damages and profits arising from the alleged infringement, a final decree (p. 153) for $2,349.15 was entered for appellee. The appeal is taken from the whole decree (p. 154).

The pleadings are in the usual form; the answer alleging invalidity of the patent because the alleged improvement was not patentable subject-matter (being at most a mere aggregation); and also because it was incapable of being patented in view of the prior state of the art. Insufficiency of specification and non-infringement were also alleged.

Testimony was taken on behalf of appellee to show the advantages of his alleged improvement, extensive sales, and favorable recognition. He also adduced testimony to show the nature of borated cotton made and sold by appellant, and that such cotton embodied the alleged improvement.

Appellant took testimony in support of the defences above mentioned, and showed that the prior art included cotton saturated with a boracic acid solution as an antiseptic dressing, as also cotton saturated with glycerine, and it had been suggested that cotton thus glycerized was permeable to medicinal liquids, leaving nothing to be done but the selection of the special medicinal liquid, consisting of a solution of boracic acid for permeating glycerized cotton or to assemble the two old dressings by using cotton, boracic acid solution, and glycerine together to aggregate the advantages, if any, of these three substances.

Afterwards appellee took testimony in rebuttal to show that none of these things was a full anticipation of the patent.

His Honor Judge Coxe held (p. 67) that the patent was valid and that appellant had infringed. The usual interlocutory decree was then made.

Proofs were taken by both parties, and the Master found and reported, that appellant realized from its infringement of appellee's patent the sum of $1,637.45; that same was entirely due to such infringement; that by reason of appellant's presence in the market as competitor, appellee was forced to lower his prices for the patented article; and that he suffered damage thereby to the extent of $269.14 (p. 135).

Appellant requested the Master to find certain proposed findings of fact and propositions of law, (pp. 139 to 144); and appellee presented certain requests to find, (p. 144). The Master, as will appear from his disposition of such findings of fact and propositions of law, found or refused to find, the same, as the case might be, pursuant to the tenor of the findings of his report. Appellant filed exceptions to such parts of the Master's report as held that it had derived profits from the sale of the infringing article; that such profits were entirely due to the infringement; that appellee was forced to lower his prices for the patented article by reason of appellant's competition, in consequence of which he was damaged to the extent of $269.14, as aforesaid; and to the manner of computing such profits by the Master, as well as to his exclusion of the items of interest on capital, charged by appellant; and to his respective refusals to find the findings of fact and propositions of law submitted by the appellant; and to the finding by him of such of the requests to find, submitted by appellee, as were found by the Master (pp. 145 to 151). Appellee filed no exceptions.

His Honor, Judge Wallace, overruled all of the exceptions filed by appellant, and adopted and approved the Master's report, (p. 151), and on August 26, 1890, made a final decree (p. 153), directing that said sums for profits and damages, with interest from the date of the filing of the Master's report, together with costs to be taxed, should be paid by appellant.

On the accounting, appellant contended that it had incurred certain expenses in manufacturing and selling the infringing article. All of these expenses, which were charged specifically to the article in question, were conceded by the parties, and were found by the Master, to be correct. A general factory charge was claimed, intended to cover such items as could not be specifically charged to the goods. It appeared that this per-

centage for general expenses of factory included items of interest on capital invested, the appellant claiming that it should be allowed interest on invested capital in the business. The Master found that appellant should not be allowed interest on capital invested, and this is one of the questions raised on this appeal in regard to the amount of the profits, if any are held to have been proved. The other question in this regard is as to the correct amount to be charged by the appellant as the percentage of general selling expense. The Master has found this percentage, from certain testimony to which he refers in his report, to be 29 per cent.; appellant claimed on the accounting that it should be 50 per cent.; the question is, what percentage should be allowed for general selling expense, if any percentage can be determined from the evidence? Another question on this appeal is, as to whether, on the proofs, any computation can be made as to profits; and whether there is not, in fact, a failure of proof in this behalf.

The question is also raised, as to whether any damages should be awarded to appellee for enforced reduction of his prices, caused by the competition of appellant.

II.—Assignments of Error.

1. It was error to hold, in view of the showing of how little appellee did, as compared with the prior art, that his object "was to produce a *simple* and *inexpensive* antiseptic dressing" (p. 67).

2. It was error to compare what appellee accomplished with a previous use of boracic acid, "*only in a fluid state or as powder*," and to compare the manner of using appellee's dressing, with the statement in his patent that it was previously "necessary to immerse the matter to be preserved in the

fluid or to cover it completely with the powder, requiring in either case *large quantities* of the acid" (p. 67).

3. It was error to compare cotton saturated with boracic acid and glycerine solely with a prior use of boracic acid as powder coating or as a bath of solution, because the evidence shows that at most appellee is to be credited merely with adding glycerine to a dressing which had been made of cotton saturated with boracic acid solution or boracic acid solution to a dressing which had been made of cotton saturated with glycerine (p. 67).

4. It was error to hold that the use of cotton, with boracic acid and glycerine, added "to their preservative properties the germ-filtering quality and elasticity of the cotton," because cotton had previously been used as a germ filter with boracic acid, and had also been used as a germ filter with glycerine (p. 67).

5. It was error to hold that appellee had made an invention in view of the article in Defendant's Exhibit A, Druggists' Circular, and the general knowledge which existed as to the properties of boracic acid and its solutions; for even according to evidence adduced by appellee, the addition of glycerine to the old dressing described in this article would have made appellee's dressing, and as the evidence shows that glycerine was added solely for its well-known hygroscopic property, and that its presence or absence made no practical difference, its adoption simply involved good judgment (p. 68).

6. It was error not to hold that, in view of what had been set forth in Defendant's Exhibit B, American Journal of Pharmacy, as to "Glycerized Cotton for Dressing Wounds," and in view of the general knowledge of the properties of boracic acid and its solutions, that there was no invention in-

volved in adding a boracic acid solution to cotton impregnated with glycerine (p. 68).

7. It was error to hold with reference to the said article on "Glycerized Cotton for Dressing Wounds" that water was absent, because it is manifest from evidence in this case that water would invariably be present in a cotton saturated with glycerine, for the reason that glycerine would imbibe and hold water (p. 68).

8. It was error to hold in view of the statement in the said article on "Glycerized Cotton for Dressing Wounds" that wadding impregnated with glycerine would be permeable to all medicinal liquids, that there was any invention in adding a boracic acid solution (p. 68).

9. It was error to hold that the writer of the said article on "Glycerized Cotton for Dressing Wounds" gave no "hint that he knew that with it (glycerized cotton) could be combined the preservative properties of boracic acid in an uncrystallized condition as a convenient, effective and permanent antiseptic composition;" because it is manifest from the evidence that any one skilled in the art, having in mind the suggestion of adding to glycerized cotton, medicinal liquids, would have known that a solution of boracic acid could have been used and would naturally have thought of such use (p. 68).

10. It was error in view of the very full dissertation on glycerine and its properties made in Defendant's Exhibit C, American Journal of Pharmacy, to hold that the use of boracic acid solution with glycerine upon cotton constituted an invention (p. 69).

11. It was error in view of the prior publications and the evidence setting forth the prior knowledge of cotton, boracic acid, and glycerine, to hold

that appellee had made a patentable invention (p. 69).

12. It was error to hold "that the intelligent chemist, setting out properly to combine the enumerated ingredients into which the cotton is to be immersed, and with which it is to be impregnated, could hardly go astray;" for it is manifest from the evidence that the results mentioned in the patent could be attained only by the use of certain proportions, and experiments would have been necessary to ascertain these proportions (p. 68).

13. It was error to hold that the very indefinite directions given in the specification of the patent in suit were sufficient to comply with the requirements of law for a specification (p. 68).

14. It was error to hold that in "the extracts introduced by defendant to establish lack of novelty, copied from pharmaceutical journals of conceded reputation and authority, we find similar language used," and to attach any importance to such a finding; because the extracts are not in this respect analogous to the specification of the patent (p. 68).

15. It was error to hold that appellant had infringed appellee's patent in view of the fact that said patent was limited to a dressing which, to attain the specified advantages, was to have no boracic acid crystals, and the evidence shows that defendant's dressing was not only composed of cotton, impregnated with glycerine and boracic acid in solution, but also with boracic acid in crystal form (p. 68).

16. It was error to render the interlocutory decree for appellee (p. 69).

17. It was error to hold that because appellant manufactured and sold the borated cotton of appel-

lee's patent, "it (appellant) was properly held liable for the profits derived from the manufacture and sale of that article, notwithstanding (that) it might have made and sold the cotton, boracic acid and glycerine, which are the ingredients of borated cotton, if it had chosen to do so, and at the same, or even a larger profit"; and that "instead of selling these ingredients, however, the defendant preferred to convert them into the new chemical composition invented by the complainant:" and it was error to hold that "whatever profit it derived accrued by reason of appropriating the patented invention" (p. 151).

18. It was error to hold that the Master "properly refused to allow the defendant, as an element of the factory cost of the borated cotton, interest on the capital of the corporation invested in its business" (p. 152).

19. It was error to hold that the Master "properly found that the percentage for selling expenses, which should be added to the factory cost of all the goods sold by the defendant, exclusive of the goods known as Benson's plasters, was 29 per cent." (p. 152).

20. It was error to hold "That a fair interpretation of the very confusing statement of the cashier of the defendant, (the witness Hopping) is that instead of 50 per cent., the amount to be added (as general selling expense) was $\frac{76,837}{132,473}$ of 56 per cent" (p. 152).

21. It was error to hold "That the testimony, showed that the defendant was the only competitor of the complainant in the market in selling the borated cotton of the patent, and that, in consequence of the reduction of the price made by the defendant, the complainant was compelled to reduce his price in order to retain his customers." (p. 152).

22. It was error to overrule (p. 151) appellant's exception, (p. 148) to the Master's refusal to find its third proposed finding of fact (p. 139), viz.: "That during the period covered by the accounting the defendant was not the only competitor in material intended for the same purpose as that for which the patented article was designed."

23. It was error to overrule (p. 151) appellant's exception (p. 148) to the Master's refusal to find its fourth proposed finding of fact, (p. 139), viz.: "That there is no proof showing, that during the period covered by the accounting, the defendant was the only competitor in material intended for the same purpose as that for which the patented article was designed."

24. It was error to overrule (p. 151) appellant's exception (p. 149) to the Master's refusal to find its fifth proposed finding of fact, (p. 139), viz.: "That the complainant was not compelled to reduce the price of the patented article because of the competition of the defendant."

25. It was error to overrule (p. 151) appellant's exception (p. 149) to the refusal of the Master to find its sixth proposed finding of fact (p. 139), viz.: "That there is no proof showing that the complainant was compelled to reduce the price of the patented article because of the competition of the defendant, and that, *non constat*, the sale, during the period of the accounting, of the other articles intended for the same purpose as the patented article, led to a reduction of price, if any was made."

26. It was error to overrule (p. 151) appellant's exception (p. 149) to the Master's refusal to find its seventh proposed finding of fact, (p. 140), viz.: "That the complainant did not reduce his price (20 per cent.) twenty per cent. in the beginning of 1887, but reduced it gradually, if at all."

27. It was error to overrule (p. 151) appellant's exception (p. 149) to the Master's refusal to find its thirteenth proposed finding of fact, (p. 140), viz.: "That the proofs show that the persons, who, during the period of the accounting, bought the infringing article from the defendant, did, both before and after such period, purchase borated cotton containing no glycerine, and for the same purposes and uses as those for which the infringing article was intended; and that this showing renders it probable that, if they had not been supplied with the infringing article, they would have bought, in lieu thereof, the borated cotton containing no glycerince."

28. It was error to overrule (p. 151) appellant's exception (p. 150) to the Master's refusal to find its fourteenth proposed finding of fact (p. 141), viz.: "That the proofs show that defendant sold as much borated cotton containing no glycerine, both before and after the period of the accounting, saving only as to fluctuations which were evidently due to seasons, as defendant sold of the infringing article during the period of the accounting; and that this showing renders it probable that if defendant had not made the sales of the infringing article, it would have, in lieu thereof, sold a like quantity of the borated cotton containing no glycerine."

29. It was error to overrule (p. 151) appellant's exception (p. 150) to the Master's refusal to find the seventeenth proposed finding of fact, submitted by it to him (p. 141), viz.: "That the proofs failed to show that the complainant suffered any damage through the sales which the defendant had made of the infringing article, or by any act of the defendant."

30. It was error to overrule (p. 151) appellant's exception (p. 150) to the Master's refusal to find its nineteenth proposed finding of fact (p. 141), viz.: "That the defendant made no gains, savings, ad-

vantages, or profits, by the use of glycerine in the infringing article, but, on the contrary, suffered a loss of $2.60 per 130 pounds of the infringing material sold, owing to the use of glycerine therein."

31. It was error to overrule (p. 151) appellant's exception (p. 150) to the Master's refusal to find its twenty-first proposed finding of fact (p. 141), viz.: "That the complainant has failed to give any evidence towards separating that part of the profits or saving, if any, which is due to the patented feature in the material sold by the defendant, during the period of the accounting, from that part of the profits or saving, if any, which is not due to the patented feature, and has failed to give any evidence that the whole profits or saving made by defendant, if any, is due to the patented feature."

32. It was error to overrule (p. 151) appellant's exception (p. 151) to the refusal of the Master to find its twenty-second proposed finding of fact (p. 142), viz.: "That the complainant has failed to give any evidence towards separating that part of the damages, if any, which is due to the patented feature in the material sold by the defendant, during the period of the accounting, from that part of the damages, if any, which is not due to the patented feature."

33. It was error to overrule (p. 151) appellant's exception (p. 151) to the refusal of the Master to change his action in regard to the third proposition of law, submitted by the appellant to him (p. 142), and as to which the Master qualified his assent by writing, "I so find under the conditions stated in my report," which said proposed proposition of law was as follows, viz.: "That the defendant should be allowed to prove the general expenses of its business and to deduct the ratable proportion thereof from the profits made from the use of the patented article."

34. It was error to overrule (p. 151) appellant's exception (p. 151) to the refusal of the Master to find its fourth proposition of law (p. 142), viz.: "That the defendant should be allowed to charge interest on the capital invested by it, as a part of the expense of the business."

35. It was error to overrule (p. 151) appellant's exception (p. 151) to the refusal of the Master to find its fifth proposition of law (p. 142), viz: "That the defendant should be allowed to charge the ratable proportion of the salary, or salaries, of its officers and employees, as a part of the expense of the business."

36. It was error to overrule (p. 151) appellant's exception (p. 151) to the refusal of the Master to find its seventh proposition of law (p. 143), viz.: "That the value of the improvement over the old method is the rule by which the profits, if any, of the defendant should be computed."

37. It was error to overrule (p. 151) appellant's exception (p. 151) to the refusal of the Master to find its thirteenth proposition of law (p. 143), viz.: "That the complainant must show by direct proof that the defendant prevented sales by the complainant by reason of its infringement."

38. It was error to render the final decree in favor of appellee (p. 153).

What is the Patent For?

The title of the alleged invention given by appellee in his specification (p. 40) is a New and *Improved* Borated Cotton, which was correct because it implied that appellee was not the originator of borated cotton, but merely an improver of that article.

The introductory statement of the specification is that "This invention has for its objects to combine

"*the various advantages* of cotton-fibre with those "possessed by boracic acid and glycerine for preserv-"ing animal and vegetable matter from decay." What could more clearly indicate absence of invention? Is not this an admission that no new compound, even of boracic acid and glycerine was originated? His statement would surely have been very different if he had believed that the identity of any of the substances had been lost in a new compound. Manifestly his statement is tantamount to saying that he wished to *preserve the individual properties and characteristics* of cotton, boracic acid and glycerine, and to aggregate their various *advantages* in one article of manufacture.

Further on in this introductory statement it is admitted that boracic acid had been previously "used as a preservative agent in a fluid state"; but this admission is qualified by the statement that in its former use "the matter to be preserved had to "be immersed in the solution of boracic acid," and that "a very large quantity of boracic acid was used."

In another part of our brief we will show that a boracic acid solution had also been used upon cotton, and hence that appellee is not entitled to any favorable consideration as being the first to so use it.

Next, the specification contrasts the alleged invention with the prior art thus imperfectly set forth, by saying:

> "My present invention, which consists in saturating cotton-fibre with boracic acid and glycerine in a manner hereinafter described, enables me to apply a very small proportion of boracic acid and glycerine to the cotton-fibre with fully as good an effect as though the matter to be preserved were entirely embedded in large quantities of the solution or powder. It enables me, at the same time, to utilize the germ-filtering properties of the cotton and its elasticity as a superior material for packing or covering delicate tissue."

This statement is wholly immaterial because predicated upon ignorance that a solution of boracic acid had previously been applied to cotton.

Then it is said:

> "I produce my improved borated cotton as follows: I first prepare a solution of boracic acid in the usual manner, and add thereto a small proportion of glycerine. For the preservation of tender substances, such as veal, I may also add from ten to forty per cent. of soda or potash, never sufficient, however, to reach neutrality. The cotton, either in bulk or wadding, is next immersed in the solution until well impregnated therewith and then pressed, to discharge all surplus solution, or so much thereof as may be required. The cotton is then dried and ready for use."

The drying could only be partial, for we shall hereafter show that water of the solution was left in the finished article.

This statement of the specification as to how the alleged new dressing is to be prepared is not important, for it merely amounts to saying that first a solution of boracic acid is prepared in a manner which was old, that to this solution is added a small proportion of glycerine, and that cotton in any form is saturated with this mixture; for the use of soda or potash is made optional.

It must be noted that nothing is said about the strength of the boracic acid solution and that the only information of any kind which has been vouchsafed concerning it, relates to the manner in which it may be made, and not to its condition or strength when made. As to the amount of glycerine to be used, nothing of value is said, for the statement that a "small proportion" shall be used is indefinite.

When we discuss another branch of the case, it will be seen that a small proportion of glycerine will not secure the advantages which are mentioned as

constituting the cause of any favorable recognition which appellee's borated cotton may have received.

In the latter part of the specification, appellee distinctly states that glycerine is used because of its hygroscopic property. Appellee here says, that owing to this property, glycerine aids in the diffusion of the acid and hence in the preservative effect of the prepared cotton It will be noted that there is no contention that the glycerine of itself adds preservative properties to what would be afforded by the boracic acid alone. There is nothing to indicate how the glycerine can aid in the diffusion of the acid.

That glycerine was not contemplated as adding any preservative property to that afforded by the boracic acid is made apparent by the statement of the specification that "When applied to the mate-"rial to be preserved, either as a covering or as a "wrapping or packing, the cotton will constitute a "filter for keeping germs of putrefaction from pass-"ing through, and *the boracic acid* absorbed by "the cotton *will* at the same time, *preserve* the sur-"faces from decay, *and counteract* ALL *injurious in-"fluences of germs or other elements of destruction* "already in contact with such surfaces."

We are left in ignorance of the kind of cotton which is to be used. Certainly there is nothing to show that raw cotton was contemplated. No new function of cotton is set forth.

The claim is for "The borated cotton, being cotton "which is saturated with boracic acid and glycerine "substantially as herein shown and described." Obviously it is not a claim for a new compound. but a claim for three things assembled together, so that after being assembled they remained unchanged to such extent that it was still necessary to describe them by their individual names, or in other words, to specify them as being individually present in the finished article. It will be observed that the claim is not even limited to boracic acid in solution.

Could anything more clearly indicate than does this specification, considered as a whole, that the appellee contemplated nothing more than an aggregation of cotton, to "constitute a filter for keeping germs of putrefaction from passing "through," boracic acid to "preserve the surfaces from decay, and counteract all injurious influences of germs, or other elements of destruction, already in contact with such surfaces," and glycerine because of its hygroscopic property? How could language more clearly express the intention of preserving the individual characteristics and properties and to aggregate them?

As the strength of the boracic acid solution and the proportion of glycerine were left entirely to the manufacturer, it is clear that appellee did not even set forth a practical development of the idea which he contemplated. On the contrary, he merely suggested the idea, and left the manufacturer to carry it out as might seem best to him.

Is not the patent invalid on its face? There is nothing in the specification, and when the evidence is considered, it will be seen that it contains nothing, to indicate a discovery of any new property in cotton, or in boracic acid, or in glycerine.

When we discuss the evidence it will become apparent that it is as barren as the specification of any indication of a new development of a single property of the cotton, the boracic acid, or the glycerine. Nor is there anything in the specification, or the evidence, to show that any known property of the cotton, or the boracic acid, or the glycerine has been utilized in a manner non-analogous to what had been done before, or even in degree different to what had been previously attained.

Is the Specification Sufficient to Support the Patent?

As before observed, the specification shows nothing new in the manner of producing a solution of

boracic acid, and gives no information as to the strength of solution which shall be used. It states nothing definite about the quantity of glycerine, but contains only the very vague and indefinite information that a *small* proportion is to be used. The manufacturer therefore is left to follow his own preferences with regard to the relative proportions of the boracic acid and glycerine which he shall employ, or to experiment in order to ascertain what may be required.

The specification being, therefore, a mere suggestion and not a specification conforming to legal requirements of the use of cotton, boracic acid and glycerine for preserving animal tissue must, we submit, be held insufficient to constitute a consideration for the contract involved in the granting of a patent. On this general ground, aside from specific provisions of the statutes concerning the necessary characteristics of a specification, is not the patent invalid? Tyler *v.* Boston, 7 Wall., 327.

If the specification had set forth that the three substances in order to be efficacious required to be assembled in certain relative proportions and that appellee had discovered and published these proportions, the case might have been different.

The evidence shows that to secure the result mentioned in the specification certain proportions of boracic acid and glycerine are necessary, and it fails to show what knowledge of these proportions existed before the application of appellee for his patent.

Stillman, testifying on behalf of appellee (p. 13, Q. 17) in answer to a question as to how the solution of boracic acid is usually made, says: "It dissolves in about 25 parts of cold water, 8 to 12 parts of hot water; authorities differ on that, however. Possibly in its own weight of hot water, and water is the solvent generally used." He fails to state when this was first known.

He says (p. 13, Q. 18), that cotton in bulk or in

wadding immersed in a solution of boracic acid with glycerine will be impregnated with the solution.

Appellant's chemist, Williams, says (p. 47, x-Q. 21), that boracic acid crystals would be present if equal parts of boracic acid and glycerine were used. Such crystals would, to say the least, impair the value of the dressing, as may be learned from the evidence.

Appellee's witness Meuman says (p. 31, x-Q. 62), that there would be crystals present, and he says (p. 30, x-Q. 54), that "to make the proper combination, 50 parts of boracic acid and 61 to 65 of glycerine, according to the concentration of the commercial article," would be necessary; and he adds (x-Q. 65), that chemical combination can be produced by using equal parts, but that it would result in free boracic acid. He says if 15 parts by weight of boracic acid be dissolved in 100 parts hot water, 15 parts glycerine added, and the solution allowed to cool to ordinary temperature, say 60° Fahrenheit, he should judge that 10 parts more or less might crystalize.

So it is clear, even from the evidence taken by appellee, that to obtain a borated cotton saturated with a solution of boracic acid and glycerine, it is absolutely necessary to mix the boracic acid solution and the glycerine in certain proportions in order to avoid the formation of boracic acid crystals and to obtain a smooth surface.

What does the Evidence show about Boracic Acid?

Appellee's patent, as we have seen, admits that there was nothing novel in the solution of boracic acid, by omitting information about it except that it was to be prepared "in the usual manner."

It also admits that boracic acid was the substance relied upon "as a preservative agent."

The evidence is entirely in accord with the patent. Stillman testifying on behalf of appellee (p. 14,

x-Q. 25) says that boracic acid was used for its antiseptic properties "*being much more powerful in this respect than glycerine alone.*" He admits (p. 14, x-Q. 28) that the properties of boracic acid were well known.

Appellee (p. 18, x-Q. 38) says that boracic acid has long been known as a preservative of animal and vegetable matter. He also admits (p. 25, Q. 11–13) that cotton impregnated with boracic acid would be as efficacious without as with the addition of glycerine.

Exhibit A, extract from Druggists' Circular and Chemical Gazette, June, 1875 (p. 64) states that Dr. J. Edmonds, in a complicated case of amputation of the thigh, "had employed dressing of lint steeped in a hot saturated solution of boracic acid with most satisfactory results in preventing putrefactive discharge. The bandage could remain for thirty-six or forty-eight hours without the slightest putrefactive odor."

There has been no attempt at denying that lint is included in the term cotton, or at least that it would be a full equivalent therefor. A definition of lint given in Webster's Unabridged Dictionary is: "Linen raveled or *scraped into a soft substance* and used for dressing wounds and sores."

Appellant's witness Williams, a theoretical and practical chemist, says (p. 42, Q. 10–11) that these publications show an antiseptic dressing consisting of lint and a boracic acid solution.

His Honor, Judge Coxe, differentiated this publication from appellee's patent solely upon the ground that (p. 69) "this dressing was probably applied in "a moist condition to the wound. No glycerine "was used." We think that his Honor misapprehended the condition of borated cotton made under appellee's patent, for if he had not done so he would not have attempted differentiation on the ground that the dressing described in the Druggists' Circular was used in a moist state. Obviously, appellee's dressing is used in a moist state for the

avowed purpose of the glycerine is to keep the dressing moist. All the evidence confirms the statement of appellee's patent that glycerine was used because of its hygroscopic property, or, in other words, its property of absorbing moisture, and thereby keeping the dressing moist.

Our position is that this extract from the Druggists' Circular is capable of differentiation only because of its failure to set forth the use of glycerine, and that it cannot be differentiated upon the ground that it was a moist dressing, and that appellee's dressing is a dry dressing. Obviously any difference would be in degree, not in kind. Never has there been any contention that it can be differentiated upon the ground that lint is made from flax and not from cotton. Originally lint may have been made from flax, but for years, and as far back as the Civil War in this country, it has been made from cotton. Even if it had never been made from cotton, there would certainly be nothing patentable in applying to cotton what had been previously used on flax.

There is absolutely nothing in the record or in appellee's patent to show that a dressing consisting simply of cotton and boracic acid solution would, so long as the water of the solution remained unevaporated, be less efficacious than appellee's dressing. In other words, there is nothing in this case to show, nor has there been any contention, that a dressing consisting of cotton and a boracic acid solution would possess increased antiseptic properties, because of the addition of glycerine.

Appellant's witness Williams (p. 42) also refers to the Lancet of January 3, 1874, as showing a similar dressing to that which we have discussed in connection with the Druggists' Circular.

The only attempt at differentiation by appellee's witnesses is found in the testimony of appellee and his witness Meumann. Appellee says (p. 22, Q. 11–13 15), that boracic acid, after the evaporation of the water, would be impaired. Thus he avoids denying that while the dressing remained moist it

would equal in efficiency a dressing made under the patent in suit.

Meumann says (p. 25, Q. 12), of the dressing described in the Druggists' Circular, that "the cotton prepared in the manner described in the article would act the same as Mr. Am Ende's cotton, provided it be used immediately after immersion."

It is clear, therefore, from everything that has been said concerning boracic acid, that glycerine when used according to the patent in suit, is of no advantage except to keep moist, and therefore efficient, the old dressing which had been made of cotton or flax lint and a solution of boracic acid.

As glycerine had no other function, what was there patentable in merely adding glycerine?

It is said (p. 22, Q. 18 and p. 28, Q. 35) that boracic acid would, by reason of its antiseptic properties, have the function of preserving glycerine, but this is immaterial as there is nothing to show that such function was necessary or indeed advantageous; and in the absence of any showing that glycerine needed an antiseptic for its preservation or that it would be liable to fermentation if used alone in cotton as a dressing, nothing can be made of this point.

The practical equivalence of a dressing composed of cotton and boracic acid solution to one differing only by the addition of glycerine has been demonstrated by appellant's steadily increasing business after the injunction precluded the use of glycerine (pp. 75 and 121).

What does the Evidence show about Glycerine?

It will be remembered that the patent ascribes nothing to glycerine, except advantages due to its hygroscopic property, and that it is used solely to keep the dressing moist.

Defendant's Exhibit B (p. 65), which is an extract from the American Journal of Pharmacy, published in 1871, refers to wadding saturated with glycerine for the purpose of rendering it permeable to medi-

cinal liquids without causing it to lose any of its suppleness and lightness, thus suggesting the use of glycerized cotton as a base for any medicinal liquid. The description of the manner of preparing the dressing is "to pour a small quantity of glycerine over the square sheet of wadding and afterwards express it as strongly as possible."

Defendant's Exhibit C (p. 65), which is an extract from the American Journal of Pharmacy for 1867, stated that the "excipient properties (of glycerine) excel all other known solvents," and mentioned it as a solvent for boracic acid. In this article it was said (p. 66): "When exposed to the air it absorbs one-half its weight in water. It never absorbs oxygen, hence it never becomes rancid when originally pure." The latter statement not having been denied, it is conceded that boracic acid was not needed to keep glycerine from fermenting.

It is also remarked in this article (p. 66) that glycerine "has the capacity of diffusing itself freely over and through organic matter, incorporating itself between organic molecules, by which it is absorbed and appropriated. All organic substances, from the hardest bone to the finest connective tissue, are penetrated by it with such diffusive force as to make their minute structure astonishingly transparent." This shows that its property of diffusion was not discovered or developed by appellee.

Further, it was remarked in this article (p. 66), "All organic substances, soaked in glycerine, are thoroughly preserved, both as to form, integrity and *softness*." This precludes any contention that appellee was first to produce softness by using glycerine.

In addition, it was said in this article (p. 66) "Applied to suppurating surfaces which are painful and produce an ichorous pus, glycerine dressings change the abnormal conditions by arresting the degenerating process through its antiseptic and astringent properties." If, therefore, glycerine has any antiseptic or preservative property, appellee was

not the discoverer of that fact. But even if he had been the discoverer of this property, it would avail him nothing, because the stronger antiseptic property of boracic acid would have rendered any antiseptic power of the glycerine immaterial.

This article also suggested (p. 66) the application of glycerine to enlarged glands and abcesses either alone *or with a medicament dissolved in it.*

Boracic acid is not suggested specifically, as mention is made merely of "iodine, &c." Certainly as compared with this suggestion, the suggestion of the patent in suit (the patent as a whole amounts to nothing more than a suggestion) does not involve any invention because it simply relates to a substitution of one medicament capable of being dissolved in glycerine for another.

It will be seen that this article refers to everything in connection with glycerine that is advanced in the patent in suit or in the evidence for the appellee. The power of glycerine for diffusing itself; its power of dissolving medicaments including boracic acid; and its property of keeping moisture are all mentioned.

His Honor, Judge Coxe, differentiates the dressing described in Defendant's Exhibit B, Journal of Pharmacy, with regard to the absence of boracic acid solution. His Honor says (p. 68): "True, it is stated that Prof. Gubler found this wadding permeable to all medicinal liquids, but there is no hint that he knew that with it could be combined the preservative properties of boracic acid in an uncrystalized condition as a convenient, effective and permanent antiseptic composition."

Of the other article in Defendant's Exhibit C, Journal of Pharmacy, his Honor held (p. 68), that it "shows great familiarity with the characteristics and uses of glycerine on the part of the writer. He knew its excipient, hygroscopic, and penetrating properties. He knew that it was a solvent for boracic acid, but he certainly did not know—at least, he did not divulge the

knowledge, that it could be combined with dissolved boracic acid, and thus held in cotton fiber for antiseptic purposes." It is hard to understand upon what line of reasoning his Honor arrived at the latter conclusion. Glycerine being known as a solvent for boracic acid, and a boracic acid solution being old and well known, what opportunity was there for doubt as to the power of glycerine to keep boracic acid in solution?

Appellant's witness Williams states (p. 43, Q. 18) that "glycerine has for many years prior to the date of patent (in suit) been known to be hygroscopic, hygroscopic meaning the property of absorbing moisture from the atmosphere. The liquifaction of a solid by virtue of moisture absorbed from the atmosphere is usually termed deliquescence; the property a liquid has of absorbing moisture from the atmosphere would be called hygroscopic; glycerine is hygroscopic."

Williams also says (p. 47): "Glycerine being a hygroscopic liquid, has the property of absorbing moisture from the atmosphere; the extent of this absorption is largely increased as the surface of the liquid is increased. When cotton is impregnated with a solution containing glycerine, upon the evaporation of the liquid used as a solvent the glycerine is left disseminated throughout the cotton upon the fibres—the surface of this hygroscopic liquid exposed to the air having thus been greatly increased, the glycerine on the fibres of the cotton is therefore in a position to exercise its hygroscopic qualities very fully. In doing this, it attracts some moisture from the air and prevents dryness of the cotton—this dryness being prevented to a certain extent by the glycerine itself, it being a liquid."

Williams demonstrated that glycerine alone will render cotton hygroscopic (p. 44, Q. 22, 23), he having saturated cotton with a given amount of glycerine and having found after its exposure to the atmosphere that it weighed more than the original

weight of cotton and glycerine alone. This is quite important, because it shows that boracic acid has no action in connection with the glycerine towards making cotton hygroscopic.

It is said (p. 57, x-Q. 26) that glycerine makes boracic acid stick to the fibre. But this distinctly and in terms refers to crystals of boracic acid, whose presence is objectionable, and not to boracic acid solution which is of course a liquid.

Appellee's witness, Stillman (p. 14, x-Q. 26 says that glycerine is used to make a soft dressing. He admits (p. 44, x-Q. 27) that the properties of glycerine had been well known for many years, and one of the old publications commented upon this property.

Appellee says (p. 18, x-Q. 38 and x-Q. 41) that glycerine "is not a preservative agent at all, and has not been known as such prior to the patent in suit, nor is it known to-day." He adds (p. 19, x-Q. 43) that glycerine is not an antiseptic.

He also says (p. 15, Q. 11–13, and p. 17, x-Q. 32): "The glycerine is used simultaneously for *keeping* the boracic acid in solution;" thus confirming the statement of the patent that its value was due to its hygroscopic property. He adds that it is used (*Id.*) "for increasing the absorbent power of the cotton, for increasing also the filtering power of the cotton, and thus effecting the purpose of at the same time giving out or spreading the boracic acid in solution upon the wound or flesh, producing a direct disinfection upon the tissue."

Appellee's witness Meumann endorses this testimony (p. 27, Q. 27 and x-Q. 32).

Stillman says (p. 13, Q. 19) that the hygroscopic property of glycerine referred to in the patent in suit is "the property of absorbing moisture from the air."

He adds (Q. 20) that glycerine has preservative power, but, as he does not say what kind of preservative power, and, as he here contradicts appellee, who says, as already noted (p. 18, x-Q. 38), "It is not a preservative agent at all and has not

been known as such prior to the patent in suit nor is it known to-day," his testimony upon this point is of no weight.

Stillman further says (p. 13, Q. 22) that the meaning to be given to the word "hygroscopic" in the patent in suit, is the second definition in Webster's Dictionary, to wit: "Having the property of readily imbibing moisture from the atmosphere, or of becoming coated with a thin film of moisture, as glass, etc."

Appellee says (p. 18, x-Q. 33): "Glycerine alone would never render cotton hygroscopic," but this is upset by Williams' demonstration.

Stillman says (p. 22, Q. 19, 20) that glycerine, to which a slight portion of water has been added; never dries under ordinary conditions and that the element of water in the boracic acid solution acts upon the glycerine and is really water added to the glycerine.

It may be inferred, from some of the evidence given on behalf of appellee, that he relies upon the solvent power of glycerine for boracic acid, but this cannot enure to his benefit because Stillman admits (p. 23, x Q. 31-3) that the solvent power of glycerine for antiseptics was known prior to January 1, 1876, and that it had been known as a solvent of boracic acid.

Appellee's witness, Meumann, says (p. 26, Q. 17, 18) that unless cotton has been made specially solvent it cannot be saturated with glycerine by pouring a small quantity of glycerine over a square sheet of wadding and afterwards expressing it, and that if "cotton is really saturated with glycerine this glycerinated cotton would be permeable to all those liquids which have no chemical action on either glycerine or cotton." Meumann adds (p. 29, x-Q. 40) that glycerized cotton would be permeable to weak solutions of other medicinal liquids.

Meumann adds (p. 28, x-Q. 40) that if to the lint saturated with a boracic acid solution, as described in the Druggists' Circular, glycerine were added,

the dressing would become identical in properties to that described in the patent in suit. Is not this a conclusive admission of the trivial nature of the alleged invention? The uselessness of glycerine has been demonstrated by the increasing business of appellant since it was restrained by the injunction from using glycerine.

Advantages of Cotton.

Am Ende says (p. 19, x-Q. 46) that the "addition of cotton (to glycerine) creates an entirely different state. Glycerine poured directly over a wound, and cotton with glycerine on it, cannot be compared in effect." He does not state that glycerized cotton has any advantage over glycerine, but he merely says that the action is different and explains finally that he is unable to make a comparison (p. 20, x-Q. 53), because "cotton acts mechanically and glycerine acts physically; or rather physiologically."

All the dissertation about the advantages of cotton when used with glycerine is immaterial because of the prior publications showing that cotton had been used with boracic acid solution alone and also with glycerine alone.

Much is said (p. 26, Q. 26) about what might be done with *raw* cotton, particularly with reference to the permeability of raw cotton with glycerine and by boracic acid, but there is nothing either in the patent or in the evidence to show that any one would want to use *raw* cotton, and it is preposterous to suppose that any one would contemplate applying to a wound anything so filthy and harsh. Moreover, appellee says (p. 86, Q. 12; and p. 49, x-Q. 38) that he does not use raw cotton.

Advantages of Water.

It is proved (p. 57, x-Q. 27), that there is no advantage whatever in having water present in a dressing. It is used only to dissolve the boracic

acid and its only function is that of a solvent for the acid.

Even after the drying of a dressing, water is left remaining (p. 57, Q. 27). As before intimated the reference to drying in the patent in suit, means nothing more than the removal of *part* of the water.

Water is also added to the finished dressing by the glycerine which takes it from the air.

What does the Evidence show about the Aggregation of the two old Dressings?

Appellee's witness Stillman makes it very clear that boracic acid and glycerine were merely aggregated, instead of being chemically combined, for, speaking of the product, he says (p. 14, x-Q. 25, 26), that the boracic acid is used for its antiseptic and preservative properties, and that the glycerine is employed because it acts as a soft dressing overcoming the natural roughness resulting when a boracic acid solution is used alone. Appellee (p. 15, Q. 11–13, and p. 17, x-Q. 32) and his witness, Meumann (p. 27, Q. 27, and x-Q. 32), confirm this.

It is said (p. 27, Q. 26–37) that raw cotton can be more easily saturated with boracic acid and glycerine than with glycerine alone, "because the obstacle in raw cotton for saturating it with water liquids is a fatty matter which pervades the natural fibre." The reason given for this is because boracic acid can partly dissolve the fatty matter while glycerine can not. This is immaterial, because no one shows that it is desirable to use raw cotton. Moreover, it is quite evident that boracic acid solution alone would permeate even raw cotton just as readily if glycerine were absent. But the facts that the patent in suit does not specify raw cotton and that appellee says he does not use it conclusively dispose of this point.

Meumann admits (p. 28, x-Q. 40) that the addition of glycerine to the dressing of lint saturated

with a boracic acid solution, as described in the Druggists' Circular, would result in a dressing identical with that set forth in the patent in suit.

Summary of Art.

In the Court below there was a contention on behalf of appellee that the property of glycerine for keeping boracic acid in solution was unknown at the date of his alleged invention. On what line of reasoning counsel felt warranted in taking that position is not apparent. It is impossible to deny that the evidence shows prior knowledge that glycerine was itself a solvent of boracic acid, and moreover, that water was a known solvent for such acid. It is equally clear that the property of glycerine for imbibing water from the atmosphere and transmitting it to surrounding objects was well known. How could any one familiar with these facts have lacked knowledge of the power of glycerine to keep in watery solution that which had been dissolved in water.

Much was said about the advantage of glycerine in keeping a dressing soft as well as moist. Clearly appellee was not the discoverer of this property.

Another contention was that the power of diffusion possessed by glycerine was useful in appellee's dressing besides its property of maintaining surrounding objects in a moist and soft condition. What originality for utilizing this property of diffusion can be credited to appellee?

It was also contended that boracic acid would prevent deterioration of the glycerine and dissolve fatty matter in raw cotton.

We need not look at the prior art with regard to the contention which is predicated upon raw cotton, for the patent says nothing about raw cotton, appellee testifies (p. 86, Q. 12, and p. 49, x-Q. 38) that he does not use raw cotton, and it is obvious that no one would apply such a harsh, filthy material to a wound.

As to the contention about the utility of boracic acid for preventing deterioration in glycerine, it is only necessary to say that there is no evidence showing a liability of deterioration in glycerine under the conditions of its use in a dressing, and that any utility which boracic acid could have as to preserving glycerine would arise solely from the antiseptic property, for years known as its distinguishing characteristic.

We also remember a remark about the utilization of the germ filtering property of cotton, but the prior recognition of this property is too clearly shown by the old publications to warrant the contention that appellee was the first to discover it.

Where was there opportunity for invention in view of the prior art?

It was old to make a dressing of lint (cotton or the equivalent of cotton) saturated with a solution of boracic acid. Such a dressing was public property, even according to testimony adduced by appellee. The addition of glycerine would have made it identical in every respect with what is claimed in the patent in suit. The immateriality of glycerine was demonstrated by appellant, who not only marketed the old dressing composed solely of cotton and boracic acid solution, but succeeded in doing a larger business with this old dressing than with the dressing in which glycerine was used.

Would the addition of glycerine to the old dressing of cotton and boracic acid solution make a patentable change in view of all that had been known about it and its unimportance? We have shown that unless glycerine is used with a boracic acid solution in a certain proportion it cannot prevent crystallization. This proportion is not set forth in the patent.

Under the doctrine in Hollister *v.* Benedict & Burnham, 113 U. S., 59, did the addition of glycerine amount to a patentable invention? Its hygroscopic property was the only one which rendered its use desirable, and that was well known.

At most the addition of glycerine amounted to a mere aggregation, because it was used solely to add individual and characteristic properties to those of boracic acid and cotton (Union Edge Setter *v.* Keith, 139 U. S., 530; Adams *v.* Bellaire Co., 141 U. S., 542).

We submit that the use of glycerine resulted from nothing more than a mere commercial suggestion, and hence was not patentable (Leggett *v.* Standard Oil Co., 149 U. S., 287).

But it is not enough to compare appellant's dressing with the old dressing consisting of cotton and boracic acid solution, for long prior to any invention made by appellee a dressing consisting of cotton and glycerine had been devised, and in this dressing, according to the evidence of all the witnesses, the glycerine would necessarily have kept the cotton soft and moist.

Moreover, as the fact that a glycerized cotton was permeable to medicinal liquids had been publicly discussed, and as the facts that glycerine was a solvent and would supply moisture to anything assembled with it had been announced, nothing was left for appellee but to actually use boracic acid, in such cotton. Would the fact that appellee was the first to do this act constitute him an inventor, in view of such a prior state of the art?

As there had been a practically useful dressing in which all the properties of boracic acid solution had been used with those of cotton, exactly as in the dressing of the patent in suit, and as there had also been another dressing in which all the properties of glycerine had been used with those of cotton exactly as in the dressing of the patent in suit, what opportunity was left for making an invention by assembling all these substances in one and the same dressing?

Appellee evidently thought that boracic acid solution would not remain moist long enough to be marketable, and it was this ignorance of the possi-

bility of marketing such a dressing which suggested the addition of glycerine.

Even if, for the purpose of argument, the superiority of a dressing containing glycerine, were conceded, the addition of the glycerine resulted only from the exercise of good judgment, and not from an act of invention, in view of the fact that boracic acid solution and glycerine had each been used alone with cotton, and when used together afforded no advantages, except the individual advantages which resulted from their separate use.

The contention in appellee's specification as to a saving in boracic acid is not sustained by the evidence. It was based on ignorance of the dressings described in the prior publications.

Utility.

Appellee testifies (p. 15, Q. 2) that the use of his borated cotton "was quite extensive. It was introduced into most hospitals, in the private practice of physicians, who made public communications upon the efficiency." He adds that it has become a staple article for medicinal purposes, and has been mentioned in scientific works and medical journals. Public recognition (p. 15) was given to it at the Centennial Exposition in Philadelphia, by the American Institute of New York and by the Sanitary Commission connected with the State Fair of New Jersey. He produces (p. 35, Q. 56) an American Institute diploma, and mentions (p. 35, Q. 57) a number of persons who have communicated with him about his different manufactures. He refers (p. 35, Q. 57) to endorsements by physicians.

Appellee's witness, Meumann, says that he has known of appellee's borated cotton for at least eight years and that it is considered a very useful article by druggists and physicians as well as laymen.

Appellee's witness, Vander Emde, says (p. 37) that this cotton was prescribed by physicians and that there is nothing in competition with it, but he

merely bases his statements as to the preference of physicians for it by the demand which exists for the article and not by any special circumstances.

Neither Neumann or Vander Emde was in a position to have any valuable experience.

There is not a word of evidence to show that such success as was attained is to be attributed to the alleged improvement, or, in other words, to the addition of glycerine to the old dressing of cotton and boracic acid solution.

Utility proved in such a way cannot be considered as establishing patentability. As has been frequently stated, our statute requires novelty as well as utility, and that novelty must be patentable novelty, or in other words, novelty involving invention (McLain *v.* Ortmayer, 141 U. S., 419; Lovell Mfg. Co. *v.* Carey, 147 U. S., 635; Grant *v.* Walter, 148 U. S., 547; Duer *v.* Cabinet Lock Co., 149 U. S., 216).

Does the Evidence Show that any New Compound was Formed?

Appellee's counsel, obviously from fear of defeat, on the ground that appellee made nothing more than an aggregation, made an ineffectual attempt to show by evidence that a compound known as boroglycerine was formed of a solution of boracic acid mixed with glycerine, or that if boroglycerine was not formed, possibly some unknown mysterious substance resembling boroglycerine in some respects, but differing from it in others, might be formed.

The patent does not state that boro-glycerine or any other compound is formed, but quite the contrary.

Boro-glycerine cannot be formed at the temperature used in making appellee's dressing (p. 61, Q. 2).

Boro-glycerine cannot exist in the presence of water and is so highly hygroscopic that the moisture imbibed from the air would dissolve it into boracic acid and glycerine (p. 59, x-Q. 48 and p. 60, x-Q. 49–51).

These reasons effectually dispose of the contention.

INFRINGEMENT.

The evidence which we discussed in considering the sufficiency of appellee's specification, shows that special proportions are necessary to avoid the formation of boracic acid crystals on the surface of the cotton. These proportions were the only possible subject matter for a patent. By a preponderance of evidence it is made apparent (p. 30, x-Q. 54; p. 31, x-Q. 62, and p. 47, x-Q. 21), that unless at least 61 to 65 parts of glycerine are used to 50 parts of boracic acid free acids in the form of crystals will appear on the surface of the cotton. It is shown (p. 48, x-Q. 28, and x-Q. 33), that appellant used equal parts and (p. 48, x-Q. 26), that about 10 per cent. of the boracic acid would be in a crystalline state.

If appellee's patent is for a dressing having a smooth surface free from crystals, as contended by appellee's witnesses in setting forth advantages, then manifestly appellant has not infringed the patent. But our principal position is that the patent contains nothing more than a suggestion, incapable of adoption without experiment, and for this and other reasons unpatentable.

HAS APPELLEE ADDUCED ANY EVIDENCE FROM WHICH THE PROFITS, IF ANY, MADE BY APPELLANT, CAN BE COMPUTED?

It is submitted that there is no evidence in the record from which it is possible to positively and affirmatively compute and ascertain the profits, if any, made by appellant from the sale of borated cotton during the period covered by the accounting.

The burden was upon appellee, by reliable and tangible proof, not estimate, conjecture, opinion or assertion, to distinguish and positively and affirma-

tively to prove, first, the profits; second, the amount of profits, and third, that they were due to the patented feature.

Blake *vs.* Robertson, 4 Otto, 728.
Brady *vs.* Atlantic Works, 3 Bann. & Ard., 577.
Star Salt Castor Co. *vs.* Crossman, 4 *Idem.*, 566.
Garretson *vs.* Clark, 15 Blatch., 70.
Sessions *vs.* Romadka, 145, U. S., 29.
Crosby Valve Co. *vs.* Consolidated Valve Co., 141 U. S., 441.
McCreary *v.* Penn. Canal Co., 141 *Idem.*, 459.

Appellant complied fully and fairly with every demand made upon it by appellee for information in relation to the cost to appellant of manufacturing and selling borated cotton during the period covered by the accounting, and also furnished all information required by appellee as to any other branch of its business (pp. 71, 73, 74 and 76); and pursuant to the order of the Master produced three statements; one marked Statement A, showing all sales of borated cotton made by it during the period covered by the accounting, dates of such sales, prices at which goods were sold and names of purchasers (pp. 127 and 158); another, marked Statement B, showing the cost to appellant of the cotton, the boracic acid, and the glycerine from which the borated cotton was manufactured, together with the cost of manufacturing and selling such borated cotton (pp. 76 and 123); and a third, marked Statement C, showing the sales of borated cotton made by appellant during the period covered by the accounting, in different styles of packing; the cost per pound on bases of calculation explained in statement "B"; the aggregate cost and aggregate net proceeds of sales as set out in statement "A," and the net profits derived therefrom by appellant, as well as the amount of borated cotton containing glycerine in the possession

of appellant on the 22d day of November, 1888, the day on which the injunction in this suit was served (pp. 76 and 126)

Appellant in statement "B" divided the items of cost of manufacturing and selling borated cotton into three classes, as follows: I. Those items which could be charged specifically to the article in question, such as cost of cotton, glycerine, packing, cartons, &c. (pp. 77 to 89, 80 to 82 and 123). II. General expense of factory, consisting of those items of expense incurred in manufacturing the goods which could not be specifically charged to them, such as fuel, salary of factory superintendent, &c. (78, 82 to 84 and 123). III. Selling expense, being the cost of marketing the goods. This charge is obtained by taking the actual cost of merchandise and adding thereto general factory expense and calculating what percentage the total store expense is of that amount (pp. 78, 85 and 123).

The expenses included in class I. were conceded by the appellee (Q. 22, 23 and 24, p. 87), and by the Master to be correct (p. 136).

The items included in class II., which are stated by the appellant to amount to 30 per cent. of the cost of merchandise when it leaves the factory (pp. 78, 82 to 84 and 123) are conceded by the Master and by His Honor Judge Wallace to be correct in so far as they include the expenses covered by this item, with the exception of the charges therein made for interest on real estate and interest on plant and manufactured stock on hand, both of which items for interest are eliminated by the Master (pp. 137 and 83), which ruling of the Master is adopted by the Court below. The exclusion of these items of interest on capital will reduce this percentage to $22\frac{3}{4}$ per cent. Their exclusion is claimed by the appellant to have been error, but this phase of the case will be discussed hereafter under the heading of "interest on capital.

The items included in class III., which were stated by appellant in the first instance, and in

Statement B, to amount of 50 per cent. of the cost of merchandise, with the general factory expense of 30 per cent. added thereto (pp. 78 and 85), were afterwards shown by the witness Hopping, the cashier of appellant, to be incorrect and improperly calculated (Q. 8 to 16, pp. 118 to 120.)

For the purpose of determining what percentage should be added for selling expenses, to the cost of manufacturing, the Master, after stating that the appellee's testimony must, for this purpose, be disregarded, and a basis for computation be sought for elsewhere in the proofs (p. 136), claims to find such a basis (p. 137) in the testimony of Hopping (pp. 85, 118 to 120).

The Master (p. 137) says: "The testimony in the case shows that the general business of manufacture included articles which required more expensive appliances, more power, perhaps greater attention and more skilled labor than did the article in question; but the evidence furnishes no means for the Master to discriminate and no serious attempt seems to have been made for so doing. A conspicuous example is afforded in the sales department; large sums were paid to advertise and sell Benson's capcine plasters, no part of which should be charged to borated cotton" (p. 137). This statement of the evidence is correct and true, and shows that up to this point the Master properly apprehended the meaning thereof; but immediately afterwards, where he claims in his report to have found the means of eliminating these sums, meaning the sums expended for advertising and selling Benson's plasters, he fell into error, as will appear from a careful reading of this part of the testimony.

He says (p. 137): "The means of eliminating these sums are found in the testimony of Mr. Hopping, produced and examined on the part of the defence, from which it would seem that the 50 per cent. first claimed by the defendant as selling expense, should be reduced to 29. I adopt this basis as the only one disclosed and as the one which from

all the facts I believe to be approximately correct," and on this theory finds that during the period in question appellant's net profits amounted to $1,637.45 (p. 138).

The testimony of Hopping on this point is as follows:

8. Q. In this statement (Statement B) it appears that a charge of 50 per cent. is made for the expense of selling borated cotton. Is that charge correctly stated at that figure?

A. That is a correct average cost of selling all goods manufactured by the defendant, including borated cotton.

9. Q. Is 50 per cent. the proper percentage to be charged for the expense of selling borated cotton by the defendant?

A. No.

10. Q. Why is it not?

A. Because the proportion of the expenses chargeable to Benson's plaster is larger than that chargeable to the rest of the goods manufactured by the defendant.

11. Q. Of what items is the 50 per cent. made up?

A. Store expenses, including travelers; payroll, advertising, loss on furniture, interest on accounts receivable and stock on hand figured at cost.

12 Q. Are all of those items charged in that statement, the expense of selling borated cotton and goods of a like character manufactured by defendant?

A. They are.

13. Q. Should they, as a matter of fact, be so charged?

A. No; the cost of advertising Benson's, and an uncertain proportion of other advertising, should not be charged to the expense of selling general merchandise and the whole of the traveler's expenses should be charged to general merchandise.

14. Q. Explain, please, stating the figures, the correct charge that should be made against borated cotton for its proportion of the selling expenses of the defendant?

A. The average amount spent in advertising Benson's plasters for 1886, 1887 and 8, including all of what we call general advertising, a variable proportion of which is for Benson's plasters, is $36,555. The average for the same year expended for travelers is $32,314. These two items amount to $68,869. This amount deducted from $132,473, the average store cost figured, as already stated, for the same period, means $63,604, general expenses of selling goods, of which Benson's plasters bear a proportionate part. I find that the sale of Benson's plasters for the period named, average as near as may be 30 per cent. of the total sales. I, therefore, for convenience, taking 30 per cent. of the amount stated above, $63,604, amounting to $19,081, and added thereto the amount of advertising Benson's plasters, including general advertising, namely, $36,555, making $55,636, thus eliminating substantially Benson's expenses from the general, leaving as chargeable to all other merchandize except Benson's $76,837, thus showing that the proportion of expense of Benson's represented by the 50 per cent. is as $55,636 is to $132,473.

The cost, including labor, directly expended in the manufacture of Benson's plasters, exclusive of general expenses of the factory, is $3.12 per gross; 30 per cent. general expense of factory as per Statement B, amounts to 93.6 cents, which added to the $3.12 makes $4.056 cents, the cost per gross of Benson's plasters delivered at our store. The average sale of Benson's for the period mentioned is 7,990 gross per year, which, at our selling price of $21 per gross, would amount to $167,790. Ninety per cent. of our sales are to wholesalers at 20 per cent. discount, the remainder to retailers at list prices. This would give us net results of the sales, $137,588. The same number of gross, 7,990, would cost at the store, at 4\frac{5}{6}$ a gross, amounts to $32,407, which added to the expenses of Benson as stated above, makes the cost to the defendant $88,043, making an average profit for the year of $49,545, which is about

81 per cent of the total profits. The expenses of all other merchandize is $76,837, and the profit thereon about 19 per cent. of the total profit. That is, the general merchandize cost to sell about 58 per cent. of the 50 mentioned in our calculations on Statement B, at a net profit of 19 per cent. of the total profits. While Benson's cost to sell about 42 per cent. of the 50 mentioned in statement B, with a net profit of about 81 per cent. of the total profit.

15 Q. In this calculation was anything allowed for the services of president of the defendant in the item of general store expenses?

A. No.

16 Q. So that making proper allowance for his services would necessarily increase the expenses of selling borated cotton by the proportionate amount of such allowance, would it not?

A. Yes (pp. 118 to 120).

The Master was clearly wrong, because it is plain from testimony of the witness Hopping that no facts are disclosed from which the exact selling expense of the patented article can be inferred or ascertained. It was claimed before the Master, and before the Court below, and it is submitted now, that it appears from this testimony that the amount $36,555 was not stated by Hopping as having been expended for advertising Benson's plasters, but was spent for general advertising, and that only a "variable proposition" or "proportionate part" thereof was for Benson's plasters. What that "variable proportion" or "proportionate part" amounted to the witness failed to state, and there are no facts in the testimony from which it can be determined or even conjectured. Appellee should have supplied proof on this point if he would have made it a basis on which to justify such a finding. The burden was upon him to make the separation, and this he failed to do. In view of the absolute impossibility of ascertaining the amount expended in advertising Benson's plasters alone it is manifestly improper to make the computation which the Master has made in this

regard, and upon which he bases his findings as to these profits.

In speaking afterwards with reference to that part of the business relating to Benson's plasters, the witness, it is true, speaks of the cost to sell Benson's plasters, but, taking this language in connection with the context, it is clear that the witness is invariably talking of a calculation in which the aforesaid amount of $36,555 was involved, and as he has clearly stated that only a portion of this sum was for Benson's plasters his testimony not only affords no basis for the calculation which has been made, but clearly shows that such a calculation would be improper, because it would involve general advertising to an extent not known, as well as the especial advertising for Benson's plasters.

It is submitted that the testimony as to profits, made by appellant, amounts to nothing more than a failure of proof; that the findings of the Master in his report as to profits made by appellant are not based upon reliable and tangible proof; that his report in this regard is clearly based upon estimate, conjecture and assertion, and that the same is inconsistent and illogical, in support of which the attention of the Court is called to the following facts:

The Master finds, for the purpose of computing the general factory expense, that the items of interest on real estate and capital invested, charged by appellant in computing that expense at 30 per cent. (Q. 7, p. 83), should be eliminated, thereby reducing it to 22¾ per cent. (p. 137); yet in fixing the general selling expense at 29 per cent., he arbitrarily excludes the item of $36,555 for general advertising, although only an uncertain part thereof should have been excluded, on the ground that it was chargeable to Benson's plasters, and includes and allows interest on capital invested in stock on hand, and interest on accounts receivable, both of which were included in Hopping's computation of selling expenses quoted above, and this in spite of the fact that it is

impossible to ascertain from the evidence the sums charged for these items of interest, because the witness does not state either of the amounts on which they are calculated (Q. 11 and 14, p. 119).

Although it appears from Statement B (pp. 123 to 125) that the cost of manufacturing and selling borated cotton varies according to the size of the package in which it is put up, and that the cost increases as the size of the package decreases by reason of the increased labor and of the greater number of cartons required, the Master in his report finds arbitrarily, in face of the proof to the contrary, that it cost the appellant precisely the same sum per pound to manufacture and sell half-ounce packages as it cost it to manufacture and sell one-ounce packages, the price found by him being .6255 per pound (p. 138), thus demonstrating that the report of the Master in this regard was based upon conjecture, because, even if the general factory and general selling percentages adopted by the Master in his report were correct, he could not have obtained the result which he claims to have obtained upon that basis as to the cost of half-ounces or thirty-second lbs. The cost of half-ounces would necessarily be greater than the cost of ounces; the relative difference in cost may be guessed at, or conjectured, from appellant's testimony and Statements B and C (pp. 77, 81 to 82, and 126), but it is demonstrated therefrom that the cost of half-ounces must be considerably greater, and that the exact cost cannot be ascertained from the evidence.

The amount involved in the Master's error as to the price of half-ounces is trivial, but it proves that he has not confined his report to the evidence, but has been satisfied where there was a failure of proof to guess or conjecture what profit the appellant might have made, and in this instance it is submitted he has come wide of the mark.

It is submitted that the evidence as to profits made by appellant is so uncertain and incomplete that it amounts to a failure of proof on the part

of appellee, and that therefore the finding of his Honor Judge Wallace (p. 152) that the Master correctly stated the selling expenses at 29 per cent. was error, and that the exceptions taken by appellant on this behalf were well taken and should have been allowed.

HAS APPELLEE SHOWN BY THE EVIDENCE THAT THE WHOLE OR ANY PART OF THE PROFITS, IF ANY, MADE BY APPELLANT, IS DUE TO THE PATENTED FEATURE?

It was claimed by appellant, before the Master, that appellee had failed to give any evidence toward separating that part of the profits, or saving, if any, which is due to the patented feature in the material sold by appellant during the period covered by the accounting, from that part of the profits, or saving, if any, which is not due to the patented feature; and that appellee had failed to give any evidence that the whole profits, or saving, if any, made by appellant as aforesaid, are due to the patented feature (p. 141). The Master refused to find this to be the fact, to which refusal appellant duly excepted (p. 150), and his Honor Judge Wallace held that the exception was not well taken (p. 151).

It is now claimed that there is no evidence in the accounting showing any attempt on the part of appellee to separate that part of the profits, if any, due to the patented feature, from that part of the profits, if any, not due to the patent feature; or to show that the whole profits, if any, were due to the patented feature. On the contrary, the patented feature, or alleged improvement, being the addition of glycerine to borated cotton previously made with boracic acid alone, as shown in an earlier part of our brief, the evidence on this point proves, that no part of the profit, if any were made by appellant, was due to the patented feature.

The only evidence on this subject is that given by the witnesses Seabury and Hopping. Seabury tes-

tified (p. 75) that before July, 1883, "we sold borated cotton prepared by boiling the boracic acid in water, then dipping the absorbent cotton in the boracic acid solution and drying it. We first used glycerine about July 1, 1883. I never heard of Am Ende's patent until the suit was commenced."

Hopping testified, in answer to questions 25 and 27 (p. 121) that appellant for the first six months of 1883, that is, prior to the use of the patented feature, sold 1,690¾ pounds of borated cotton. That during the second six months of 1883, when appellant used glycerine, it sold 1,724¾ pounds. That during the first six months of 1888, while still using glycerine, it sold 1,581 pounds 13 ounces, and during the first six months of 1889, commencing shortly after the service of the injunction in this suit, and when the appellant had discontinued the use of glycerine, and made borated cotton with boracic acid in solution alone, as it had prior to the period of the accounting, it sold 1,769½ pounds.

The finding of the Master that the profits allowed by him are entirely "due to such infringement" (p. 138) is error, because, as was said above, there is no evidence in the case, and no attempt was made to offer any, that would show what part of the profits was due to the patented feature and what was not due to it. On the contrary, it appears from the testimony of the witnesses Seabury and Hopping (pp. 75 and 121) that the sales of borated cotton by appellant before it used the alleged improvement claimed in the patent, were as great as they were during the period of the infringement, and that after appellant discontinued the use of the alleged improvement the sales did not decrease, but were about the same. This, it is submitted, goes to show that no part of the profit, if any, made by the appellant, was due to the patented feature; and the rule of law is well settled that the patentee must separate what is due to the patented feature or show that the whole profit made by the infringer is due

thereto; and if he fails to do so he cannot recover anything.

Schillinger *vs.* Gunther, 15 Blatch., 303–310.
Burdell *vs.* Denig, 2 Otto, 716.
Goulds Mfg. Co. *vs.* Cowing, 12 Blatch., 243.
Goulds Mfg. Co. *vs.* Cowing, 14 Blatch., 315.
Black *vs.* Munson, 14 Blatch., 265.
Foulks *vs.* Camp, 10 F. R., 675.
Roemer *vs.* Simon, 31 F. R., 41.
Dobson *vs.* Hartford Carpet Co., 114 U. S., 439.

It has even been held that where the infringer's books are vague and confusing, which they are not in this case, that the patentee is not then relieved from the obligation of separating the profits due to the patented feature from those not due to it.

National Car Co. *vs.* Terre Haute, 19 F. R., 514.
Garretson *vs.* Clark, 111 U. S., 121.

The value of the improvement is the rule, and clearly the improvement claimed by appellee in this case has no value over the old method of making borated cotton, at least none has been shown in the testimony; on the contrary, the only difference that the use of the patented feature made in the manufacture of borated cotton by appellant, as appears from the testimony, was to increase the cost thereof by the amount of the expense of the glycerine used in it; namely, to the amount of $2.60 for every 130 pounds of borated cotton. (Statement B, fol. 327.)

Suffolk Co. *vs.* Hayden, 3 Wall., 315.
Locomotive S. T. Co. *vs.* Pa. R. R. Co., 2 F. R., 677.
Mowry *vs.* Whitney, 14 Wall., 650.
Black *vs.* Thorne, 111 U. S., 122.

The fruits of the advantage which the defendant derived from using the complainant's invention, over what he could have derived from using any other process or thing then in existence, constitute the profits which the complainant is entitled to recover.

Mowry *vs.* Whitney, 14 Wall., 651.

IF IT BE HELD FROM THE EVIDENCE THAT APPELLANT HAS MADE ANY PROFITS FROM THE SALE OF BORATED COTTON DURING THE PERIOD COVERED BY THE ACCOUNTING, SHOULD IT NOT, IN COMPUTING THE COST OF THE GOODS, BE ALLOWED INTEREST ON PLANT AND CAPITAL INVESTED?

In computing the general factory expense of 30 per cent. charged by appellant in Statement B (p. 123), it appears that this percentage (Q. 7 to 17, and pp. 83, 84) was computed by taking into consideration certain charges made against goods while still in the factory, all of which are admitted to be proper, but which were not susceptible of being charged specifically to each article manufactured, and of adding thereto two items of interest, one for "interest on $94,700.04 real estate (the real estate being the factory of the appellant), amounting to $2,841," and the other "interest on plant and manufactured stock on hand $164,516, amounting to $4,935.48" (Q. 7, p. 83).

The Master in his report has eliminated these two items of interest. He says "Two of these, interest on capital invested in real estate and also machinery, are of doubtful legality (Goodyear *vs.* Rubber Co., 9 Wall., 804) and should be eliminated. This would reduce the percentage in this respect to 22¾, which, from the statements of the witnesses, does not seem to be excessive" (p. 137).

Although the Master does not say so, he really eliminates interest on capital invested in real estate and on plant (meaning thereby machinery), as well

as interest on manufactured stock on hand, as an examination of the figures by making the computation for the general factory expense demonstates that, in order to reduce the percentage from 30 to $22\frac{3}{4}$, he must have excluded the two items of interest, amounting to $2,841 and $4,935.48 respectively, mentioned in question 7, page 83.

Appellant requested the Master to allow these charges of interest as a part of the expenses of the business, which request he refused (p. 142).

Appellant excepted thereto (p. 151) and his Honor Judge Wallace overruled the exception (p. 151), which ruling appellant submits was erroneous.

The case of Goodyear *vs.* Rubber Co. does not in any way apply to the case at bar. In the Goodyear case, the Court, in its opinion sustaining the report of the Master, says: "He refused to allow manufacturer's profits and interest on capital stock. This was correct. The profits made in violation of the rights of the complainants in this class of cases, within the meaning of the law, are to be computed and ascertained by finding the difference between cost and yield. In estimating the cost, the elements of price of materials, *interest*, expenses of manufacture and sale, and other necessary expenditures, if there be any, and bad debts, are to be taken into the account, and usually nothing else. The calculation is to be made as a manufacturer calculates the profits of his business."

It is submitted that no manufacturer or business man ever estimates, or arrives at, the profits of the business without allowing interest on capital invested; for the value of money is not only as well fixed as the rent of a machine or a building, but is really a necessary expense of the business, as it commands always a market value; and if the manufacturer does not use his own money in his business, it will not be denied that he could let it at interest, and that, therefore, it is worth just so much; and when a man uses his own money he loses the interest on it, and the same should be charged as an expense against the

business with the same propriety as any other expense, as, for instance, rent, interest on borrowed capital, or any other necessary expenditures. There is a very clear distinction between charging interest on capital and in allowing interest on capital stock.

Interest on capital should be allowed as an expense of the business. The fact that the interest is on capital invested and not on borrowed capital should not change this rule.

The Master has thrown out these items because of his reading of the rule laid down in Goodyear *vs.* Rubber Co. (see report), but it is submitted that interest on capital should be allowed, and also interest on machinery, under the rules laid down in The Troy Iron and Nail Factory *vs.* Corning, 6th Blatch., 354, and in the Steam Stonecutter Co. *vs.* Mfg. Co., 17th Blatch., 28, for "it must be admitted that the reasoning of these Circuit Court decisions is more convincing on this point than that of the Supreme Court case, and that the latter decision seems hardly consistent with itself, for it is difficult and perhaps impossible to see why interest should be allowed on borrowed capital and not on capital owned by the infringer. Indeed, the principle of the case of Rubber Co. *vs.* Goodyear on this point seems to have been overruled by the Supreme Court in the case of the Mfg Co. *vs.* Cowing (105th U. S., 257). In that case the Court criticised and modified the Master's report because it did not allow for use of tools, machinery, power and other facilities employed in the manufacture of the infringing article."

Walker on Patents, § 718, Sub. Div. 4.

The tools, &c., were the tangible things in which the defendant's capital was invested, and to allow for their use was really to allow interest or its equivalent on that capital.

This reasoning of Walker would seem to be sound, and is directly applicable to the case at bar.

Suppose the defendant had borrowed the money and invested it in machinery, which the money had

purchased, surely money has a market value just as much as machinery, and an allowance should be made for its use, whether owned by the defendant or not, the same as for the use of any tools or utensils used in making the infringing article.

IF THIS COURT SHOULD HOLD THAT THE PROOFS CONTAIN EVIDENCE FROM WHICH THE PROFITS, IF ANY, MADE BY APPELLANT CAN BE COMPUTED, HAS THE MASTER TAKEN THE CORRECT PERCENTAGE FOR GENERAL SELLING EXPENSE WHEN HE STATES THE SAME TO BE 29 PER CENT.?

It is submitted on the part of appellant that no accurate statement of the profits made by appellant can be computed from the evidence, and that in any event, the computation attempted to be proved by the witness Hopping, question 14, page 119, in which he states that the general selling expense applicable to general merchandise should be 58 per cent. of the 50 per cent. mentioned in Statement B, or in other words 29 per cent. of the cost of the goods when delivered at appellant's store, which percentage was adopted by the Master, is incorrect and wrong; but that such general selling expense should be 38½ per cent.

It will be seen by reading Hopping's testimony (pp. 119 and 120), that the correct average cost of selling all goods manufactured by appellant, including borated cotton (Q. 8), is 50 per cent. That this 50 per cent. is made up by taking the "store expenses, including travelers, pay roll, advertising, loss on furniture, interest on accounts receivable and stock on hand figured at cost" (Q. 11); that the cost of advertising Benson's plaster and an uncertain proportion of other advertising should not be charged to the expense of selling general merchandise, but that the whole of the travelers' expenses should be charged to general merchandise. That the sale of Benson's plasters amounted to 30 per cent. of the

total sales of appellant (Q. 14). That the total store cost, that is the total general expense of selling appellant's goods, including the item of $36,555 for general advertising, a variable proportion of which was for Benson's plasters, amounts to $132,473. From these figures can readily be obtained the per centage of the 50 per cent. that is applicable to general merchandise, because if the sale of Benson's plasters amounted to 30 per cent. of the total sales, general merchandise, in which is included borated cotton, amounted to the balance, which is 70 per cent. of the sales; in other words, 70 per cent. of the general expenses was chargeable to general merchandise, which gives $102,426, which is 77 per cent. of $132,473, the total selling expenses of the business; so that there should be charged to general merchandise for selling expenses, 77 per cent. of the percentage chargeable to general selling expenses, which, as stated above, is 50 per cent. of the cost of the goods when delivered at appellant's store, *i. e.*, 77 per cent. of 50 per cent. = 38½ per cent., which is the proper selling expense chargeable to general merchandise.

In this computation the item of $36,555 for general advertising is not eliminated and applied specifically to Benson's plasters, but is left in as a general charge against the business, where, from the testimony when read together, it properly belongs. Evidently the greater proportion of this item was applicable to general merchandise, as Hopping (Q. 14, p. 119) uses the language "a variable proportion of which is for Benson's plasters." If the greater part of this sum had been for Benson's, he would naturally have said "a variable proportion of which is for general merchandise," and this theory of applying the cost of selling expense is borne out by the fact that the profit on Benson's was at the rate of eighty-one per cent. of the total profits of the business, whereas the profit on general merchandise was but nineteen per cent. of the total profit, which

goes to show that the expense of selling general merchandise was greater than that of selling Benson's (p. 120). This fact is emphasized by the testimony of Mr. Peters (p. 78), who says, "the antiseptic department, which includes the manufacture of borated cotton, is the most expensive department."

In this connection the attention of the Court is also called to the fact that Benson's capcine was but one of many other plasters sold by appellant, many of which were sold at the same price, as will appear from the Exhibit Calendars put in evidence by appellee (p. 74), and to the further fact that appellee made no attempt to separate that part of the advertising which should have been charged to Benson, if there be any part thereof which could be separated from the general advertising, from that part thereof chargeable to general merchandise.

Appellant submits that if any computation of the cost of selling the goods can be made from the evidence in the suit, it should be made in the manner here suggested.

The following table is a statement made upon the same theory as Statement B, taking the general factory cost at 30 per cent. and the general selling cost at 38½ per cent., and from which the item of 10 pounds sold in half-ounce packages is excluded on the ground that there is no possible way disclosed in the evidence of ascertaining what it cost appellant to manufacture and sell the same.

STATEMENT *of net profits computed on the basis of 30% general factory cost and 38½% general selling expense.*

FROM JULY 1, 1883, TO OCTOBER 1, 1883.

Packages.	Lbs. sold.	Cost per lb.	Aggregate cost.	Proceeds from sales.
Bulk	234	.4694	$109 84	$126 56
Pounds	304	.5225	158 84	183 46
Half pounds	208¼	.5529	115 28	124 37
Qr. pounds	65¼	.5857	37 19	40 44
Eighth pounds	52	.6689	34 78	33 98
Sixteenth pds	146½	.7562	110 78	97 85
Thirty-second pd	.....	....	.....	.....

FROM OCTOBER 1, 1883, TO NOVEMBER 22, 1883.

Bulk	1,050	.4253	$446 56	$551 00
Pounds	4,586	.4783	2,193 48	2,688 35
Half pounds	1,757½	.5055	884 90	1,021 03
Qr. pounds	2,781½	.5402	1,502 56	1,622 66
Eighth pounds	954	.6251	596 54	619 08
Sixteenth pounds	4,336 5/16	.7124	3,089 18	2,946 17
Thirty-second pds	10	....	.....	.....
			$9,279 73	$10,054 95
				9,279 73
Net profits on sales				$775 22
Deduct value on hand at cost				245 94
Net profits				$529 28

The following table is a statement of the net profits, computed on the same theory as the foregoing, taking the general factory cost at 22¾ per cent., that being the proper charge therefor if the items of interest on capital are excluded:

STATEMENT *of net profits computed on basis of* $22\frac{3}{4}\%$ *general factory cost and of* $38\frac{1}{2}\%$ *general selling expense.*

FROM JULY 1, 1883, TO OCTOBER 1, 1883.

Packages.	Lbs. sold.	Cost per lb.	Aggregate cost.	Proceeds from sales.
Bulk	234	.4432	$103 71	$126 56
1 Pound	304	.4934	149 99	183 46
$\frac{1}{2}$ lb	$208\frac{1}{2}$	.5220	108 84	124 37
$\frac{1}{4}$ "	$63\frac{1}{2}$	.5530	35 11	40 44
$\frac{1}{8}$ "	52	.6317	32 85	33 98
$\frac{1}{16}$ "	$146\frac{1}{2}$	.7139	104 58	97 85
$\frac{1}{32}$ "	.....	.....	.....	.....

FROM OCTOBER 1, 1883, TO NOVEMBER, 22, 1888.

Bulk	1,050	.4016	$421 68	551 00
1 Pound	4,586	.4483	2,055 90	2,688 35
$\frac{1}{2}$ lb	$1,757\frac{1}{2}$	.4755	835 69	1,021 63
$\frac{1}{4}$ "	$2,781\frac{1}{2}$	.5102	1,419 12	1,622 66
$\frac{1}{8}$ "	954	.5904	563 24	619 08
$\frac{1}{16}$ "	$4,336\frac{5}{16}$	6727	2,917 04	2,946 17
$\frac{1}{32}$ "	10	.....	.....	.....
			$8,749 75	$10,054 95
				8,747 75

Net profits on sales	$1,307 20
Deduct value on hand at cost	245 94
Net profits	$1,061 26

HAS APPELLEE SHOWN THAT HE WAS COMPELLED TO REDUCE THE PRICE BY REASON OF THE USE BY APPELLANT OF THE PATENTED FEATURE; AND SHOULD THE MASTER HAVE ALLOWED HIM ANY DAMAGES ON THE GROUND OF ENFORCED REDUCTION OF PRICE?

The Master erred, it is submitted, in finding and reporting that by reason of the presence in the market of appellant as a competitor, appellee was forced to lower his price for the patented article, and that in consequence thereof he was damaged to the extent of $269.14, because it does not appear that appellant's use of glycerine injured complainant. On the contrary, appellant's successful sales of borated cotton without glycerine, both before and after the period of the accounting, go to show that the use of glycerine had no effect on appellee's sales, or on the price at which he sold. (See Testimony, Seabury and Hopping, pp. 75 and 121).

In order to show damages by loss of sales, it is well settled, and has been held in this case (p. 140), and conceded on behalf of appellee by failure to except thereto, that, it is necessary to prove, if an infringer had not made sales, that they would have been made by the patentee, thus eliminating the possibility of another article being purchased as a substitute.

On this doctrine it was incumbent upon appellee to prove that the loss, which he claims to have suffered by enforced reduction of price, was caused by the sale of the patented article as distinguished from some other article which might have been used as a substitute.

It has been proved that a dressing composed simply of cotton and a boracic acid solution, was public property prior to anything invented by appellee. Appellant's success in selling such a dressing demonstrates that it could be sold as a substitute for, and therefore in competition with, the patented article.

Appellee has failed to show that his reduction of price would not have been entailed through sales by appellant of the old dressing made of cotton and boracic acid solution, and it is submitted that his failure to do this is fatal to his contention in this behalf.

For the reasons above stated, and because appellee has not established by satisfactory evidence, nor by any evidence at all, that the alleged reduction was caused by the infringement, or how much of such reduction was due to the fact that the infringing article contained the patented feature, he should not recover damages caused by the alleged forced reduction of his price.

Ingersoll *vs.* Musgrove, 14 Blatch., 541.
Maier *vs.* Brown, 17 F. R., 736.

It is respectfully submitted, that the final decree of the Circuit Court, entered herein on the 26th day of August, 1890, should be vacated, with costs to appellant.

EDWIN H. BROWN,
NORMAN T. M. MELLISS,
Of Counsel for Appellant.

Office Supreme Court U. S.
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Supreme Court of the United States,

OCTOBER TERM, 1893; TERM NO. 285; CASE NO. 14,325.

SEABURY AND JOHNSON,

Appellant,

vs.

CHARLES G. AM ENDE,

Appeal from the Circuit Court of the United States for the Southern District of New York.

BRIEF ON BEHALF OF THE APPELLEE.

ARTHUR v. BRISEN,

Of Counsel for the Appellee.

Evening Post Job Printing House, New York.

No. 14,325.

Supreme Court of the United States.

OCTOBER TERM, 1893.

No. 285.

SEABURY & JOHNSON,
Appellant,

vs.

CHARLES G. AM ENDE.

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BRIEF ON BEHALF OF THE APPELLEE.

Statement of the Case.

This suit was brought in the court below to restrain infringement of Letters Patent No. 181,024, granted August 15, 1876, to the complainant, Charles G. Am Ende, for an Improvement in Composition of Perated Cotton. A copy of the complainant's patent will be found on page 40 of the

Record. After the filing of the bill of complaint, which in the usual form charges the issue and validity of the patent, its ownership by the complainant, and its infringement by the defendant corporation, and which seeks the usual relief of injunction and accounting, the defendant corporation filed its answer (see page 5 of the Record) denying the infringement and denying the validity of the complainant's patent, in view of certain facts pleaded in said answer, and of certain conclusions of law to which the answer likewise makes reference. Replication having been filed in the usual form (p. 8, Record), the parties proceeded to proof, and after the defendants had nearly concluded their testimony, they were, by stipulation (see p. 8), authorized to amend their answer by setting up certain prior publications in said answer in further support of the allegation that the patent in suit was void because of these and other prior publications. The proofs having been closed, the case came up for final hearing before Judge Coxe, who, in an opinion reproduced on page 67 of the Record, held the patent of the complainant good and valid and ordered an injunction and an accounting in the usual form. The interlocutory decree, dated November 17, 1888, is reproduced on page 69 of the Record. The Master to whom the cause was referred, Mr. John A. Shields, after taking voluminous testimony for the respective parties, filed his report (p. 135), in which he found the extent of infringement, and found further that the defendant realized the sum of $1,637.45 as recoverable profits from its infringement of the complainant's patent, and further that, in view of the infringement, complainant was forced to lower his prices for the patented article, thereby suffering a recoverable loss or damage of $269.14.

To this report the defendant filed numerous exceptions, and brought the cause up before the Circuit Court, Judge Wallace presiding, for argument on these exceptions. The opinion of Judge Wallace,

sustaining the Master, will be found on page 151, and the final decree, finding the complainant entitled to $1,637.45 as defendant's profits, and to the further sum of $269.14 as complainant's damage, on page 153. From this final decree this appeal was taken.

Judging from the character of the defendant's contentions in the court below, we have reason to assume that the defendant's argument will be based principally upon the following points, namely:

1st. On the question of validity of the patent, in view of supposed insufficiency of specification;

2d. On the supposed anticipation of the patent by three publications offered by the amendment to the answer (p. 8, Record);

3d. On an attack upon the Master's report.

In order to enable the Court to properly consider these questions, it will behoove us to explain the patent, the character of the infringement, the merit of the invention, and thereupon to discuss the three above defenses.

The Patent.

The specification of the patent starts out by saying that the invention has for its object to combine the various advantages of cotton fibre with those possessed by boracic acid and glycerine for preserving animal and vegetable matter from decay. The specification further states that prior to Am Ende's invention, boracic acid had been used as a preservative agent in a fluid state, and also as a powder, and that such use thereof involved considerable waste. The patentee then states:

"*My present invention, which consists in saturat-*
"*ing cotton fiber with boracic acid and glycerine in*
"*a manner hereinafter described, enables me to ap-*
"*ply a very small proportion of boracic acid and*

"glycerine to the cotton fiber with fully as good an "effect as though the matter to be preserved were "entirely embedded in large quantities of the solu- "tion or powder. It enables me, at the same time, "to utilize the germ-filtering properties of the cotton "and its elasticity as a superior material for pack- "ing or covering delicate tissue."

Then the specification states that after preparing a SOLUTION of boracic acid in the usual manner, a small proportion of glycerine is added thereto, and that for the preservation of tender substances from ten to forty per cent. of soda or potash may be added. The cotton is next immersed in the solution until well impregnated therewith, and then pressed, to discharge all surplus solution or so much thereof as may be required. The cotton is then dried and ready for use. It is further stated that when applied as a covering or wrapping, the cotton constitutes a filter for keeping germs of putrefaction from passing through, and the boracic acid absorbed by the cotton will at the same time preserve the surfaces from decay and counteract all injurious influences of germs or other elements of destruction already in contact with such surfaces. "*The glycerine is added*," as the specification says, "*to increase the preserving power of the borated cotton. It renders the cotton slightly hygroscopic, thus aiding in the diffusion of the acid and in the preservative effect of the prepared cotton.*"

Finally the specification states:

"I have found that the impregnated fiber shows, "even under a good microscope, no difference from "a fiber not impregnated with boracic acid, and "that, therefore, although a very thin film of acid "may adhere to the exterior surface of the fiber, the "main proportion of the acid is absorbed by and "diffused within the fibers. In consequence the "acid can, in use, be but gradually released from "the fiber, and will thus produce a constant and "lasting effect."

The claim is in these words:

"*The borated cotton, being cotton fiber which is* "*saturated with boracic acid and glycerine, sub-*" *stantially as herein shown and described.*"

In view of the fact, frequently referred to in the proofs, that Am Ende's borated cotton can to-day be found in every hospital in the country—being a preventive of suppuration of wounds, and in cases of amputation protecting the wounded surfaces from infection and decay; in view of the fact that in the private practice of physicians this borated cotton is largely if not exclusively used for the purpose of covering wounds and shielding them from decaying influences, we must try to ascertain why this invention has proven so eminently useful. The principal preventive of suppuration or decay in the patented cotton is the boracic acid. We may as well say that it is *the* element which prevents decay. But the proof shows that boracic acid when dissolved and applied to cotton fiber is very apt to dry on the fiber and to cover the same here and there with crystals of boracic acid (Ans. 11 16, p. 22). In order to make the entire surface of the cotton and each of its fibers a carrier of boracic acid, in order to enable this cotton to be kept for any length of time and nevertheless to be ready for instantaneous use when needed, it was necessary to not only disseminate the boracic acid over and through the entire mass of fibers, but also to retain it in liquid condition on said fibers. The glycerine is an hygroscopic liquid, that is to say, attracts moisture from the air. This property of the glycerine was utilized by the inventor. He mixed it in small quantity with the solution of boracic acid, and then steeped the cotton in the mixture, and when the cotton was afterwards squeezed, and even dried, a thin covering of dissolved boracic acid would nevertheless embrace each fiber of the cotton wadding and a thin film of glycerine would hold it in solution. This thin cov-

ering of glycerine, because of its hygroscopic qualities, attracted moisture from the surrounding atmosphere and thereby retained the boracic acid at all times in a state of solution, in contradistinction to the crystalline state, which is to be avoided. For it must be clear to every observer of this most useful invention that if the boracic acid is allowed to crystallize it will cover *parts* of the fibers with crystals only, and not the entire surface thereof, and will therefore not prevent elements of decay from adhering to those parts of the cotton fibers which the boracic acid does not touch. The borated cotton of Am Ende became a public blessing because it enabled the boracic acid to remain liquid, to thoroughly permeate the cotton wadding, so that it would prevent elements of decay, germs of putrefaction, &c., from settling on said cotton, and so that, no matter how the surgeon should tear a certain mass of cotton, the new surface produced would be an antiseptic surface the same as the original surface of the package.

Such being the invention, we will next look into the question of

INFRINGEMENT.

It was admitted by the defendant (see top page 14) that certain packages of borated cotton which had been bought of a druggist by the witness Maggie Stack (see pp. 9 and 10, Record) emanated from the defendant's establishment. One of these packages, it appears, was analyzed by the chemist Dr. Stillman, who says that he found the cotton covered with boracic acid and glycerine, finding these ingredients as boracic acid and glycerine, the boracic acid being soluble in the glycerine with a small amount of water (see his answers 11 to 13, p. 12, Record; see also in connection with Am Ende's 19th answer, p. 16, Meumann answer 53, p. 30). Dr. Stillman had furnished the complainant with a written report of this analysis dated May 22, 1887,

and reproduced on page 39 of the Record. Mr. Am Ende, as a witness in his own behalf, further testifies on p. 16, that the borated cotton of defendant is saturated with boracic acid and glycerine. He also testifies (answer 21, p. 16) that before bringing suit he notified the defendant asking it to desist from the infringement of the patent, and that Mr. Seabury, in response to that notice, said or impliedly said that he would not infringe in future (see answer 23, p. 16). Nevertheless, the defendant continued its infringement. It further appears from the testimony of defendant's expert witness Williams, who is the professional chemist in the employ of the defendant, that the defendants had made and at the time Williams testified still made their borated cotton in the manner described in complainant's patent. In fact, the defendant's accounting before the Master (see p. 123) showed that it continued this manufacture until November 22, 1888 (Williams testifying in 1887), and in fact up to and after the date of Judge Coxe's decree of November 19, 1888 (page 71). In his answer to the 33d question, page 48, this Mr. Williams shows that to 115 pounds of boracic acid and water, being the boracic acid solution of the patent, the defendant adds 15 pounds of glycerine, and this mixture is used to impregnate about 100 pounds of cotton. He also testifies, in answer 36, that while he was in the employ of the defendant company the same never manufactured borated cotton without the use of glycerine.

The infringement, therefore, is no longer in question, it appearing abundantly from the evidence that the defendant's product is the same as that described and claimed in the specification of the patent. Judge Coxe, in his opinion (see top p. 68), says that infringement was not denied. The only effort to escape from the charge of infringement is Mr. Williams', the defendant's expert's, assertion that on the defendant's cotton may be observed some crystals of boracic acid (see his answer 21, p. 47).

But this is clearly immaterial if besides the crystals the boracic acid is found dissolved by water and glycerine, as the patent prescribes. Williams himself admits in answer 7, page 42, that in the defendant's borated cotton the boracic acid and glycerine are found as such, meaning in solution, and again in answers 17 and 18, page 47, he admits that the glycerine maintains the boracic acid in a dissolved or liquid condition.

See also Hillman Ans 3-7 p 21

We, therefore, submit that the charge of infringement has been fully made out.

Merit of Complainant's Invention.

That the complainant's patented borated cotton has been in the market since the year 1876, and has come into extensive general use, appears from the testimony of Mr. Am Ende (page 15 of the Record; also ans. 52, p. 94); also from the testimony of the witness Meumann (answers 6 and 7, page 24); likewise from the testimony of R. Van der Emde (answers 3 and 4, p. 37). That diplomas for excellence and continued excellence were granted to Mr. Am Ende for this borated cotton in the years 1877 and 1878 appears from Mr. Am Ende's answer 56, page 35, the diploma there referred to being reproduced on page 39. That it received similar recognition at the Centennial Exhibition in Philadelphia and a silver medal from the Sanitary Commission of the State Fair of New Jersey appears from Mr. Am Ende's answer 5, page 15. That the physicians and surgeons of renown in the country have expressed their particular approval appears from Mr. Am Ende's answer 57, pages 35 and 36, also Meumann (ans. 7, p. 24). Thus Dr. Engleman, professor of obstetrics in St. Louis, writes respecting this matter:

"*I cannot sufficiently express my gratitude to Am Ende, the Hoboken chemist, whose fertile brain has furnished us with the useful preparations now in the market.*"

While Dr. Thomas Hay, of Philadelphia, writes on the same subject:

"*In gynæcological practice and office surgery this borated cotton fills a void long felt. It is thoroughly detergent, and it possesses such high healing virtues that I have been astonished at the rapidity of the healing process under its use and the pleasant and agreeable results attained by it.*"

The defendant's infringement commenced, according to the proceedings before the Master (page 123. in July, 1883, and continued until November 22, 1888) Prior to 1883 (*but not prior to* 1876) the defendant had made a cotton called by it "borated cotton," in which it used no glycerine, the boracic acid appearing in crystals on the cotton (see Am Ende, answer 54, page 34; also Seabury, p. 75). That such cotton is of no value, because the boracic acid is not effective when in a crystaline state, appears clearly, and is not contradicted. See Am Ende, answers 11 and 12, pages 15 and 16, where Mr. Am Ende says that the organisms of infection and putrefaction are *not destroyed by boracic acid undissolved.* See also Dr. Stillman's answers 11, 12 and 13, page 22, which are to the same effect; also Meumann's answers 9 to 11, page 25. The defendant finding, therefore, that a cotton steeped merely in a solution of boracic acid had no value, adopted the complainant's invention, and did so with its eyes open, for the date of complainant's patent is plainly marked upon complainant's packages (see "Complainant's Exhibit Genuine Package"), and the general reputation of complainant's cotton was such that it is not to be presumed that defendants were not acquainted with its existence. Moreover, as we have already shown, they were warned by complainant and agreed not to infringe, before this suit was brought, but failed to keep their promise.

We have therefore established that the invention of the complainant is one of merit—we may well say, with Dr. Hay, of great merit. We have further

shown that the complainant enjoyed the fruits of his patent by manufacturing and selling the patented goods. He was amply able to supply the entire demand (see Master's 3d finding, p. 144). The defendant being in the business of making druggists' supplies at first tried to make a borated cotton without the use of glycerine and found it a failure, and thereupon boldly adopted the complainant's invention, continuing to use it even after they had promised to recognize the patent.

Under these circumstances we respectfully submit the equities are with the complainant to a greater extent than in ordinary patent cases, and we are satisfied that the Court will not lightly refuse complainant the relief prayed, unless the invalidity of his patent or its anticipation appear by testimony so overwhelming that no rights remain with the inventor.

We will now proceed to discuss the supposed defenses in the order hereinabove named.

ARGUMENT.

Is the Patent Valid on its Face?

Under this head we apprehend to see the patent assailed for two reasons: *First*, because the parts entering into the patented structure are said not to coact or affect one another in a new manner; *second*, because of a supposed insufficient specification.

(*a*) In reply to the *first* criticism, sufficient appears to show that boracic acid when applied to cotton will produce a useless article of borated cotton, in that the boracic acid will, when dry, crystallize and form a crystaline covering over parts of the cotton fiber, leaving other parts wholly unprotected. These unprotected parts are exposed to the germs of putrefaction, which they are liable to carry to the wound of a sufferer, thereby injuring rather than aiding in the

curative effect. The glycerine is added, as the record shows, not only because it is a preservative substance to some extent, as Dr. Stillman shows, but also and mainly because owing to its hygroscopic properties it holds the boracic acid constantly in solution on and around the cotton fiber, rendering, as the patent states, the fiber itself hygroscopic, causing said fiber to always remain moist, and to always maintain the boracic acid in a condition of solution. Hence the glycerine does not work out its own effect only, but it affects the boracic acid and affects the cotton fiber in manner stated. Without the glycerine in its combination with these other ingredients the boracic acid would be a waste and the cotton fiber would be but ordinary cotton fiber. With the glycerine employed as a joinder or connecting link, each of the two other ingredients is affected so as to work out a satisfactory whole. In this connection it must not be overlooked that the boracic acid is not used in the mixture as boracic acid merely, but is used as a *solution of boracic acid, i. e.*, as a mixture of water and boracic acid. In this condition it is described in the patent, and in this condition it is used by the defendant, as we have seen. The assertion made by the defendant's witness Williams, that the defendant's structure *seems* to contain some crystals of boracic acid, is not borne out by his investigation, because Williams simply expresses his opinion to that effect (see ans. 21 and 22, p. 47), which opinion is fully overcome by Dr. Stillman's testimony, who examined the defendant's product under a microscope (see answers 1 to 6, pp. 20 and 21), and finds no crystals whatsoever. He finds the acid in and on the cotton in *solution*. Defendant's witness Rupp claims (ans. 2, p. 61) to have found some crystals under a microscope in a package examined by him, but he does not identify or show which package it was. It was certainly not an exhibit in this suit. Pure boracic acid, meaning undissolved boracic acid, can be dissolved in glycerine only in the ratio of ten parts of boracic acid to one hundred

parts of glycerine (see Williams, ans. 17, p. 43); but when a *solution* of boracic acid is used, one part of glycerine will hold one part of boracic acid afterwards continuously in solution; this being the proportion given by Williams in his 33d cross answer, page 48. We have, therefore, the surprising fact that although, according to the accepted formula, glycerine *dissolves* only one-tenth part of its own weight of boracic acid, it is capable of *holding* ten times this quantity of boracic acid permanently under solution, provided water had been added to the boracic acid, and provided, secondly, the mixture of water, boracic acid and glycerine is applied to a substance which exposes a very large surface to the atmosphere for the utilization of the hygroscopic quality of the glycerine. Again, the boracic acid keeps the glycerine from decaying (ans. 17, 18, p. 22; also ans. 33-35, p. 28). Hence, the ingredients water, boracic acid, glycerine and cotton fiber, being the things described in the complainant's patent, affect one another in important particulars. The water permits the glycerine to retain the boracic acid in solution and to thus hold a larger proportion of the acid in solution; the glycerine renders the entire combination hygroscopic, and maintains the boracic acid continuously dissolved; the cotton fiber exposes the preservative ingredients in an extensive film to the action of the atmosphere, so as to produce the largest possible hygroscopic effect and thereby assists in maintaining the boracic acid continuously in solution, while the boracic acid in turn preserves the glycerine from decay.

See also Stillman Ans. 3-7 p. 21

It appears further from the record that when boracid acid and glycerine are united, *in the absence of water*, a chemical union takes place and a new article is produced which is known by the term "boro glycerine." This appears from the testimony of the witness Meumann, who for a number of years has produced this boro-glycerine (see his answers 28 to 32, p. 27). Meumann distinctly shows that this chemical union, this boro-glycerine, cannot be pro-

duced in the presence of water (see his answers 48 and 49 and 77, pp. 30 and 33). Upon this testimony of Meumann coming in, the defendants were, by an order printed on page 52, permitted to take further testimony "strictly in respect to the question as to "whether glycerine and boracic acid combine "chemically to form a new substance *in the borated* "*cotton in this litigation.*" They thereupon examined the witnesses Wolff and Rupp. The testimony of Wolff does not shed much light on the subject, but rather makes it still more difficult to understand. His definition of boro glycerine is given in his sixth answer, page 54, in these words:

"*A. Boro-glycerine is a chemical compound* "*formed by heating glycerine and boracic acid and* "*consists of the residue of glycerine in which the* "*three hydroxyl-hydrogenes acids substituted by* "*one triatomic borine.*"

This answer, which we humbly confess is too deep for our understanding, was also too deep for the understanding of the subsequent witness of the defendant, Mr. Rupp, who was asked the following cross-question (p. 64):

"*x-Q. 36. Is boro glycerine 'the residue of glycer-* "*ine, in which the three hydroxyl hydrogenes acids* "*substituted by one triatomic borine?'*"

and he answers:

"*I don't understand that question. I don't know* "*what hydroxl-hydrogenes acids are. There is no* "*such thing.*

Both these gentlemen, however, Wolff and Rupp, agree that the substance boro-glycerine is a new chemical substance. Wolff denies that it can be formed at the low temperature of the drying-room, but has to admit that he has never tried to produce it at such temperature, nor does he know what the temperature of defendant's and complainant's drying room is (see his and his counsel's answers 24 and 25, p. 56). He ad-

mits in his answer 27, page 57, that the *water* is used in the complainant's and defendant's compound for dissolving the boracic acid, to which solution glycerine is added, and that on drying the cotton subsequently, some of the water still remains. Mr. Rupp (p. 60) seems to think that no boro-glycerine is found in the cotton which is described by the specification of the patent in suit. We believe that he is correct. But after all it is of little importance, as the only salient fact in the case is that boracic acid is kept in a fluid state on the cotton by the action of the glycerine, and that it is enabled to be kept in that state by having first been brought into contact with water (see Stillman, ans. 8–10, p 21). For this reason the glycerine, the water and the boracic acid are not simply substances which are present in the cotton each acting in the same manner in which it would act if left alone, but they help carry out the whole invention by their union, and can do so only in conjunction with each other (see also ans. 27, p. 23).

(*b.*) In respect to the *second* point, namely, whether the specification is sufficiently full, we are met by the criticism that the specification does not give the exact proportions of the glycerine to be used. It simply says, "*and add thereto a small proportion of glycerine.*" The patent is not addressed to a mechanic, nor even to a judge or a jury; it is addressed to men skilled in the art to which that invention pertains. Instead of showing the insufficiency of the description, the defendant, in fact, shows its sufficiency by largely relying upon a publication "Defendant's Exhibit B," which is copied, or said to be copied, from the *American Journal of Pharmacy* of November, 1871, and reproduced on page 65 of the record. In this publication we find the following language:

"In order to prepare this dressing, it is only
"necessary to pour a *small quantity of glycerine*
"over the square sheet or wadding, and afterwards
"express it as strongly as possible."

We believe that Judge Coxe, in his opinion, fully answers this branch of the defense, in where he says.(p. 67):

"*The defenses are that the specification is not so* "*clear and explicit as to enable a person skilled in* "*the art to practice the invention, and that the* "*patent is void for lack of novelty and invention.* "*Infringement is clearly established, and is not* "*denied in the brief submitted for the defendants.*

"*In considering the question presented by the* "*first defense it should be remembered that the* "*language criticised by the defendants is addressed* "*to persons skilled in the particular art to which it* "*relates. To a lawyer or a banker the specification* "*might seem vague, and, perhaps, meaningless,* "*but a pharmacist, a chemist, or even an educated* "*physician would have little difficulty in under-* "*standing it. When the patentee says he prepares* "*'a solution of boracic acid in the usual manner,'* "*he means as it has formerly been prepared. He* "*speaks of it as he would speak of a solution of* "*camphor or alum. Every druggist knows what he* "*means. He certainly might have been more* "*definite when he says that he adds to this solution* "*'a small proportion of glycerine,' but it is thought* "*that the intelligent chemist, setting out properly* "*to combine the enumerated ingredients into which* "*the cotton is to be immersed and with which it is* "*to be impregnated, could hardly go astray. In-* "*deed, in examining the extracts introduced by the* "*defendants to establish lack of novelty, copies* "*from pharmaceutical journals of conceded reputa-* "*tion and authority, we find similar language used.* "*Thus in the Druggists' Circular and Chemical* "*Gazette it is stated that Dr. Edmunds had used* "*'a solution of boracic acid,' and in the Journal de* "*Pharmacie it appears that Prof. Gubler saturated* "*his wadding with 'a certain quantity of glycerine.'* "*The formula for preparing this dressing is then* "*given. 'It is only necessary,' says the writer, 'to*

"pour a small quantity of glycerine over the square "sheet,' &c. Such expressions would seem to be- "long to the nomenclature of the art. The expres- "sion 'well impregnated' means thoroughly, com- "pletely impregnated, the word 'well' being used "in the sense that a housewife might use it when "telling her domestic to keep the bread or the joint "in the oven until well done. Tested by the rule of "Loom Co. v. Higgins, 105 U. S., 580, the specifica- "tion would seem to be sufficient.'

In this connection we beg to quote also from Loom Company *vs.* Higgins, 105 U. S., page 586, where this Court says:

"*A great deal of testimony was introduced by the defendants to show that the patentee had failed to describe his invention in such full, clear and exact terms as to enable persons skilled in the art to construct and use it. It seems to us that the attempt has failed. When the question is whether a thing can be done or not, it is always easy to find persons ready to show how not to do it.* (See in the present case the witness Wolff, who immortalized himself by his sixth answer, page 54, showing in his forty-seventh answer, page 59, how not to do it.) *But it stands confessed that the thing has been done, that is to say, the contrivance which Webster claims in his patent has been applied, and very successfully so, to pile fabric looms, and as the appellant's counsel well remarks, no one except Webster has ever appeared to claim a patent for doing it. If the thing could not be understood without the exercise of inventive power, it is a little strange that it should have been so easily adapted to the looms on which it has been used with such striking results.*"

That the description of a chemical invention is not addressed to persons ignorant of chemistry, see

Allen vs. *Hunter*, 6 *McLean*, 303.
Heath vs. *Unwin*, 2 *Web.*, 236.

It is, however, not true that the specification is insufficient in omitting the specific proportion of

glycerine. The proof fully establishes the fact that as soon as some glycerine, be it ever so little, is added to a solution of boracic acid, that glycerine will hold an equal quantity of boracic acid in solution, preventing its crystalization. It follows that when one wants to make a weak solution, one adds very, very little glycerine to the solution of boracic acid. But when the solution is to be made stronger one adds more glycerine and thereby holds more of the boracic acid in solution on the cotton. It is correct, therefore, especially to one skilled in the art, who is to read this patent, to state that a small quantity of glycerine is to be used; the largest quantity, according to the proof, being a quantity equal only to the boracic acid before it was dissolved in the water; and it is further shown that even if the minutest part of glycerine be used in connection with the boracic acid in solution, the water of the solution will, because of the presence of the glycerine, maintain the rest of the boracic acid, which the glycerine might not attack, in solution (see answers of Meumann, 77 and 78, pp. 33 and 34).

In this connection we have also heretofore pointed to other evidence in the case from which it clearly appears that a small proportion of glycerine will, when mixed on the cotton with a solution of boracic acid, hold a small proportion of boracic acid continuously in solution, while a larger quantity of the glycerine will hold more of the boracic acid in solution. It is thus left to the constructor of the invention to prepare, with the aid of the specification, a borated cotton having the requisite strength of disinfectant-covering.

Has the patent been anticipated by three publications?

The *first* of these publications, "Defendant's Exhibit A" (p. 64), shows that a physician in a certain case employed a dressing of lint steeped in a hot saturated solution of boracic acid with satisfactory results

in case of an amputation. The publication does not make any mention that the lint was dried before its application to the wound. It certainly was not; otherwise, as we have shown, the results would not have been satisfactory, since the boracic acid would have crystallized. However, the complainant's patent did not hinder, during its existence, any one from steeping lint in a saturated solution of boracic acid. As a matter of fact, the defendant itself, at a certain time prior to 1883, sold cotton steeped in nothing but boracic acid, and found that it had to abandon that sale and that it could not make a salable article of borated cotton without employing the glycerine.

Moreover, the date of said publication is not proven, nor that of any of the others. These publications were offered under objection (p. 50), because not pleaded; *afterward* the answer was amended (p. 8). But the complainant, who had relied upon his objection, was not given another opportunity to cross-examine respecting them.

Roberts *vs.* Buck, 6 Fisher, 325.

The *second* publication, "Defendant's Exhibit B" (p. 65), states that Prof. Gubler, at a meeting of some academy (where, it is not stated), exhibited some specimens of wadding prepared by saturating it with a certain quantity of glycerine which he found to render the cotton permeable to all medicinal liquids without causing it to lose any of its suppleness and lightness. He suggested that in this state it might prove a useful substitute for charpie in the event of a scarcity of that article. In its general sense this statement of Dr. Gubler is undoubtedly untrue. The witness Meumann clearly shows in his answers 18 to 25 (p. 26, Record) that there are a great many medicinal liquids to which the cotton when treated with glycerine would not be permeable. He cites a number of them, such as the solution of permanganate of potash, the solution of chromic acid, nitric acid, sulphuric acid, chlorine water,

ether, solution of potash, picric acid, picrate of ammonia and nitrous acids. He might as well have added all the fatty acids and chloroform (see Defendant's Exhibit C), and under these circumstances it is impossible to tell with what "medicinal" liquids Prof. Gubler has operated, and whether he ever tried boracic acid in solution. There is still another matter which deprives this article Exhibit B of value. It is, that raw cotton which the professor seems to describe cannot be saturated with glycerine on account of the fatty matter always found in it (see ans. 26, p. 27). We may assume, therefore, that the professor probably used cotton which had previously been treated with caustic soda, as described by defendant's expert, Williams, to make it absorbent and thus capable of receiving the glycerine. But the article does not say so, and therefore conveys no knowledge sufficient to practice the experiment. The answer to the 26th question given by the witness Meumann (p. 27), shows that as soon as boracic acid in solution is added to the glycerine, the presence of the fatty matter in the cotton is no longer an obstacle to the complete saturation.

The *third* paper "Defendant's Exhibit C," which is said to be an extract from the *American Journal of Pharmacy* of March, 1867, simply shows that boracic acid can be dissolved in glycerine, a fact which we in no manner deny, but which has no bearing upon the points of invention in this suit. For sufficient appears from our discussion of the evidence relating to boro-glycerine that boracic acid and glycerine can only unite to form a chemical union if water is studiously kept away, while the presence of a considerable quantity of water is essential to the employment of the complainant's invention, as fully brought out in the specification, which states that the glycerine shall be added, not to boracic acid, but to a *solution of boracic acid*.

On these subjects Judge Coxe in his opinion uses the following language (p. 68):

"*The article translated from the Journal de "Pharmacie et de Chimie is not an anticipation.*

"It is entiled 'Glycerized Cotton for Dressing "Wounds.' There is no reference to boracic acid. "Two of the elements of Am Ende's combination, "boracic acid and water—the acid in solution—are "wanting. True, it is stated that Professor Gub- "ler found this wadding permeable to all medicinal "liquids, but there is no hint that he knew that "with it could be combined the preservative proper- "ties of boracic acid in an uncrystallized condition "as a convenient, effective and permanent antisep- "tic composition.

"The article in the American Journal of Pharm- "acy of March, 1867, shows great familiarity with "the characteristics and uses of glycerine on the part "of the writer. He knew it excipient, hygroscopic and "penetrating properties. He knew that it was a sol- "vent for boracic acid, but he certainly did not know "—at least, he did not divulge the knowledge—that it "could be combined with dissolved boracic acid, "and thus held in cotton fibre for antiseptic pur- "poses.

"The quotation from the Druggists' Circular of "June, 1875, is entitled 'Boracic Acid,' and de- "scribes a case of amputation in which the surgeon "employed a 'dressing of lint steeped in a hot sat- "urated solution of boracic acid.' This dressing "was probably applied in a moist condition to the "wound. No glycerine was used.

"It cannot be demonstrated from the proofs that "any one prior to Am Ende accomplished what "he has described and claimed. Even though "there be a doubt, it should be resolved in "favor of the patent. The fact that others had done "something quite similar, that they had used "separately or in different combinations the ingre- "dients of his claim, should not affect his patent. "All that is described in the prior publications the "defendants may use with perfect impunity. They "may use 'lint steeped in a hot saturated solution "of boracic acid,' of 'wadding saturated with a "certain quantity of glycerine,' or boracic acid dis-

" solved in glycerine, but they should not be per-
" mitted to use cotton saturated with a solution of
" boracic acid and glycerine in the manner described
" in the specification, for that belongs to Am Ende.
" The complainant is entitled to the usual decree."

In view of the above considerations, we respectfully submit that sufficient appears to show the validity of the complainant's patent, its meritorious character, the insufficiency of the defenses attacking it, and its clear infringement by the defendant. The decree which subjected the defendant to an injunction and accounting was therefore clearly right, and should not be disturbed.

It remains to consider

The Master's Report.

The patent being for a new entirety, a new composition of matter, any profit which defendant made from the sale of the infringing goods may be rightfully claimed by the complainant as part of his recovery in this suit. As was stated by the Circuit Court in Welling *vs.* La Bau, 34 Fed. Rep., 46–43.

" When, however, the invention relates to a new
" composition of matter and the infringing article is
" made of the patented material and this alone, the
" measure of the patentee's damages may be the
" entire profit which he would have made. There is
" no room for segregation. It is not at all like a
" patented improvement upon an existing machine,
" for there it is entirely clear that evidence must be
" given to show what portion of the profits is due to
" the patented feature. Where the patent covers the
" infringing article in its entirety, no such evidence
" can be given."

The Supreme Court in Elizabeth *vs.* Pavement Co., 97 U. S., 139, stated:

" But when the entire profit of a business or un-
" dertaking results from the use of the invention,

"the patentee will be entitled to recover the entire "profits if he elects that remedy."

See also Keystone Manfg. Co. *vs.* Adams, 151 U. S., 139, 147.

We submit that in the present case the patentee is entitled to recover from the defendant the profit the defendant made from the sale of the infringing borated cotton.

The proofs show and the Master reports (p. 135) that during the period covered by the accounting, to wit, during the years 1883 to 1888, inclusive, the defendant manufactured 17,067 pounds, and sold 16,483 pounds of the infringing borated cotton, leaving on their hands undisposed of 584 pounds. The Master further finds (p. 138) that it cost the defendant $8,178.85 to make these articles; that they were sold for $10,062.24, leaving a profit on sales of $1,883.39, from which the value of the 584 pounds of borated cotton on hand, to wit, $245.94, is deducted, leaving a net profit of $1,637.45. Two of the principal figures of this finding are taken from the Defendant's Statement A, a very voluminous document, which by consent has been kept out of the record, but which, as the stipulation at the bottom of page 158 shows, gave the number of pounds sold by Seabury & Johnson as 16,483, the gross amount received from such sales as $12,493.59, and the net amount received from such sales as $10,062.24. The number of pounds sold appear from the first column of Statement C (p. 126); the number of pounds on hand on the first column of the same Statement C on page 127; this statement also showing how much of the infringing borated cotton was sold in bulk, how much in pounds, how much in half pounds, &c. The defendant's treasurer, Mr. John M. Peters, testifies at the bottom of page 79, that the second column of Statement C (p. 126), which purports to give the cost in cents per pound of the infringing borated cotton, includes over and above the actual cost 30 per cent. for so-called gen-

eral expenses and 50 per cent. for so-called business expenses. In other words, the witness Peters says (near bottom of p. 79) as follows:

"*In Statement C I have included in the amounts*
"*given in the column showing the cost in cents per*
"*pound, the amount of general expense* (30 *per cent.*),
"*and the amount of business expense* (50 *per cent.*)
"*which I have above referred to.*"

Not to trouble this Honorable Court with too minute a statement of detail, it will suffice here to say that the parties agree that the cost of cotton sold in bulk, including the actual price of the cotton itself, of glycerine, boracic acid, of labor in making the composition, of wrappers, packing cases, labels and labor in wrapping, was 26.07 cents per pound, as stated near the bottom of page 123; that the same items for the pound packages cost 29.03 cents per pound, as stated on page 118; the same for one-half pound packages, 30.41 cents, as stated near the bottom of page 124; the same for quarter pound packages, 32.53 cents per pound, as stated at the top of page 125; the same items for ⅛ pound packages sold brought the price up to 37.16 cents per pound; while the $\frac{1}{16}$ pound packages cost 42 cents per pound, all as appears from the defendant's Statement B on page 125. These figures just quoted were accepted as correct by the complainant and by the Master, having been furnished by the defendant.

Now, the Court will observe that the defendant, in order to show that, instead of making profits by these sales, it actually lost money, has added to each of these items, first, 30 per cent. for so-called general expense of factory (see the assertion near the bottom of p. 123), and then to the sum of 30 per cent. plus the actual cost, another 50 per cent. for so-called expense of doing business (see top p. 124).

The question decided by the Master, by Judge Wallace on exceptions to the Master's report, and now submitted to this Court, is whether these ad-

ditions of 30 per cent. and of 50 per cent. to the ascertained cost of the goods is justified or not. This Court held, in Elizabeth *vs.* Pavement Co., (97 U. S., 139):

"*The defendant will not be allowed to diminish* "*the show of profits by putting in unconscionable* "*claims for personal services or other inequitable* "*deductions.*"

The Master, respecting the intended deduction of 30 per cent., says (p. 136):

"*The defendant insists that to the amount re-* "*ferred to above, there should be added thirty per* "*cent. to cover its proportionate share of the gen-* "*eral expense of manufacture, which percentage* "*is arrived at by taking the general expenses* "*that cannot be distributed, such as fuel, freight,* "*insurance, salaries of superintendent, fireman,* "*engineer, carman, foreman and assistant fore-* "*man, that are charged on his books to the factory* "*proper, and which are incurred for the whole busi-* "*ness carried on, and not for any particular article* "*or department. * * * The defendant claims* "*thirty per cent. as the general expense of carrying* "*on the factory and discloses the items upon which* "*such percentage is computed. Two of these,* INTEREST ON CAPITAL INVESTED IN REAL ESTATE, *and* "*also* MACHINERY *are of doubtful legality (Goodyear* "VS. *Rubber Co., 9 Wall., 804), and should be* "*eliminated. This would reduce the percentage in* "*this respect to* $22\frac{3}{4}$ *which, from the statements of* "*the witnesses, does not seem to be excessive.*"

Hence, instead of adding 30 per cent. to the cost of the articles, the Master added $22\frac{3}{4}$ per cent. for general factory expenses. On this subject the Master finds the items of which he speaks in the 7th answer of the witness Hopping, page 83, Record, Hopping being the cashier of the defendant corporation, and called by the complainant in order to enable him to obtain the different statements from the

defendant. In this list of items it will be seen that interest was charged on $94,700 worth of real estate, and on $164,516 worth of plant and stock on hand. These items the Master declined to include in the estimated cost of borated cotton, on the ground that they did not necessarily seem to pertain to the matter in suit or to this accounting.

Respecting the further 50 per cent. addition to the cost of material, which is supposed to be an addition on account of expense of doing business, *exclusive* of factory expenses (see top p. 124), the Master says:

"*In like manner, it (defendant) insists that the "general expense of the sales department of the en- "tire business amounts to fifty per cent. of the sum "finally determined as the cost of manufacture, and "with the addition thereof the entire cost to the de- "fendant is covered.* * * *

"*The testimony shows that the defendant is en- "gaged quite extensively in the manufacture and "sale of these articles. To carry on this business, "general expenses were incurred, of which every "part must assume its just proportions, to be as "accurately determined as the facts will permit. "There may be articles which involve expense en- "tirely disproportionate to that required to make "and sell the infringing goods, in which case the "amounts being determined and allowance made "therefor, a fair and just percentage of general ex- "pense could be computed (Hitchcock* v. *Tremaine, "9 Blatch., 385). The testimony in the case shows "that the general business of manufacture included "articles which required more expensive appliances, "more power, perhaps greater attention and more "skilled labor than did the article in question, but "the evidence furnishes no means for the Master to "discriminate, and no serious attempt seems to have "been made to provide a means for so doing. A "conspicious example is afforded in the sales de- "partment. Large sums were paid to advertise and*

" sell Benson's capcine plasters, no part of which " should be charged to borated cotton. The " means of eliminating these sums are found " in the testimony of Mr. Hopping, produced " and examined on the part of the defense, from " which it would seem that the fifty per cent. first " claimed by the defendants as selling expense should " be reduced to twenty-nine. I adopt this basis as " the only one disclosed, and as the one which, from " all the facts, I believe to be approximately cor- " rect."

The Master in the above portion of his report refers to the testimony of Hopping, the defendant's cashier, who when called by the defendant testifies (p. 119) as follows:

" Q. 9. Is 50 per cent. the proper percentage to be " charged for the expense of selling borated cotton " by the defendant?

" A. No.

" Q. 10. Why is it not?

" A. Because the proportion of the expenses " chargeable to Benson's plaster is larger than that " chargeable to the rest of the goods manufactured " by the defendant.

He then proceeds to show that this 50 per cent. is made up of store expenses, including travellers; *pay roll*, advertising, *loss on furniture*, and interest on stock on hand, although, as we have seen from the answer of the same witness to his seventh question (p. 83), the addition of 30 per cent. hereinabove discussed also includes pay roll, loss on furniture and interest on stock on hand, &c. So that as a matter of fact the same items have been twice deducted by defendant. This double deduction is not only a fraud upon the complainant and upon the Court, but is, in the language of this Court an "unconscionable claim." That the claim is unconscionable will, also appear from the fact that the witness

Hopping admits that the defendant makes a tremendous profit on their sale of Benson's plaster (answer 14, page 119), while they pretend to show a loss on the sale of borated cotton. The Master found his basis for adding 29 per cent. instead of 50 per cent. in Hopping's 14th answer, page 119. It further appears from Hopping's said deposition (p. 120, ans. 19) that in addition to the 50 per cent., the defendant estimated the sum of $15,000 as a fair salary to its president (see question 19, p. 120), estimating that value (see ans. 29, p. 121) on the cost of total merchandise consumed at the factory, on the pay roll, expense, loss on machinery, interest on real estate, &c., without showing that the president ever got that salary or any salary or needed one. This addition would show that the cotton was sold by defendant at a loss of $1,043.49 (see Hopping, ans. 23, p. 121).

The defendant strenuously insisted that this "estimated" presidential salary of $15,000 per year should be charged against the complainant, so as to show the loss to the defendant of $1,043, hoping possibly to determine this case by a decree which should require the complainant to reimburse the defendant in the sum of $1,043.49 for its infringement of his patent. The Master on this subject says in his report (p. 138):

"*The defendants sought to have charged against "the account of profits a proportionate amount of "$15,000 as a reasonable yearly compensation for "its president. There is no proof that this officer "was paid anything for his services; nor were the "specific services rendered by him disclosed. This "request is also denied.*"

We might add to the above it already appears from Hopping's answer 7, page 83, that the entire pay roll of the defendant's establishment, which undoubtedly included the president's salary, was utilized to make up the first addition of 30 per cent. We have also seen from his answer (11, p. 119), that

the entire pay roll was again utilized to help make up the second item of 50 per cent., which pay roll again undoubtedly included the president's salary. The anxious endeavor of the defense to get the president's salary in a third time is therefore ludicrous. Moreover, as the Master fully shows, there is no proof of the salary paid the president. The amount was simply assumed by defendant's counsel in his 19th question (p. 120) and by the witness Peters, their treasurer, in his 7th answer (p. 122), where he says:

"*I should say that* $15,000 *a year* WOULD BE *a "very reasonable compensation for a man of Mr. "Seabury's ability in that position.*"

The deposition of Peters, on the 122d page, will probably satisfy this Court of the fairness to the defendant, to say the least of the Master's finding. We see from Statement A, page 158, that defendants sold the infringing borated cotton for the gross sum of $12,493.50. On this amount the total profit found by the Master was $1,637.45—a profit, therefore, of 13 per cent. Mr. Peters, on page 122, testifies that from his knowledge of the details and expenses and practice of defendant's business (he being its treasurer and therefore able to form a general idea), no article in defendant's line as handled and managed, including the borated cotton, should pay *less* than 10 per cent. over and above every item of cost incurred in its manufacture and sale. It appears that Mr. Peters' judgment in this respect comes very close to the Master's finding, and does violence to the defendant's contention, which calls for an actual loss to the defendant by the sale of the borated cotton.

The Court below, Judge Wallace presiding, disposed of the defendant's claim that the Master should have added 30 per cent. for factory expenses, instead of $22\frac{3}{4}$ per cent., by the second paragraph of the opinion, page 152, in which he sustains the Master for

the reason that the items eliminated are not usually charged by manufacturers as expense items. As a matter of fact the proofs do not show that the real estate on which the defendant wishes to charge interest against the complainant is real estate employed in the business of making and selling this borated cotton, nor does it prove that the machinery on which it wishes to charge this complainant is employed by it in the manufacture of this borated cotton. Mr. Am Ende's testimony (p. 86) clearly shows that no machinery is needed for the purpose of making this cotton, and we can hardly perceive the justice of a deduction on the real estate and machinery unless it be in proof that such real estate and machinery are necessarily used in the manufacture complained of. In other words, we respectfully contend that in an accounting, though the complainant is rigidly held to make full proof of the extent of infringement and of the actual cost of the infringing goods to the defendant item by item, and although this rather severe rule requires the complainant to rely wholly upon the hostile defendant and its officers for this proof, yet if having furnished the proof in question, as the complainant had succeeded in doing in this case, any deduction which the defendant desires to make in its interest from the profits disclosed by this showing must be fully proven by the defendant. Thus, for example, the Master declined to allow for the president's supposed salary, and Judge Wallace (Section 3, p. 152) holds that if the defendant had wanted to deduct for the president's salary, it was for *them* to prove that they actually paid him the salary.

On the 50 per cent. claim for "general expenses," which the Master reduced to 29 per cent., the Court below held with the Master in the fourth paragraph of his opinion (p. 152), giving the figures that disclose the 29 per cent. from Hopping's answer 14, page 119.

Inasmuch as the defendant claims that the busi-

ness of making and selling this borated cotton during six years, though amounting to the sale of over sixteen thousand pounds, resulted in actual loss to it of over $1,043, it seems that the president of a corporation conducting a business in such an improper manner is not entitled to a salary of $15,000 per year. Nor is it very likely that the defendant would have continued in the unprofitable business of selling this infringing borated cotton for six consecutive years, and to thoroughly and earnestly defend this suit if they had year after year found the business to be what they now pretend it to have been—a dead loss to them from the beginning.

So far as the defendant seeks to affect the proceedings before the Master by the claim that the patented borated cotton involves nothing but the addition of glycerine to that which existed previously, we reply briefly that that assertion is based upon error. *There is nothing in proof to show that prior to* 1876 *any borated cotton of any kind was made by any one.* It only does appear that prior to 1883 the defendant made some borated cotton without glycerine, and had to abandon it. It is not in proof, therefore, that the addition of glycerine alone is the thing invented. The entire combination, as we have heretofore endeavored to show, is the result of Am Ende's invention, and as an entire combination the subject matter involved must be considered. Certainly, prior to the invention in suit no marketable antiseptic dressing, which could be kept for years, and when needed found in perfect condition, appears to have existed.

In addition to the profits made by the defendant, the Master found that the complainant shows by his testimony that he had to reduce the price of his cotton, because of the competition by the defendant, his *only* competitor, and that this reduction entailed a loss to him of $269.14. We doubt whether any earnest effort will be made to dispute the correct-

ness of this finding. As a matter of fact, Mr. Am Ende's loss was very much greater, as his testimony shows.

We therefore submit that the decree below should not be disturbed, but pray that if, in the opinion of this Honorable Court, a recommendation to the Court below respecting the trebling of damages seems justified, such recommendation be given.

Respectfully submitted,

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